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LECTURES
ON
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NOW IN COURSE OF DELIVERY,
AT THE
UNIVERSITY OF LONDON.

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LECTURE XXXVII.

OXALIC ACID (*concluded*): — *Treatment of poisoning with this acid. Poisonous quality of oxalate of ammonia.—Poisoning with* ACETIC ACID. *Chemical evidence.—Poisoning with* ALKALIES AND THE SALTS. *Carbonate of Potassa.—Starvation from the effects of the mineral alkalies on the gullet. Symptoms, treatment, and chemical evidence of poisoning with an alkali, or a carb. of an alkali; pure potassa; carb. of potassa; carb. of soda.—Poisoning with* AMMONIA; *symptoms and treatment.— With* NITRATE OF POTASSA, *mistaken for Epsom salts. Symptoms. Difference between its action on men and quadrupeds. Treatment.—Poisoning with* BARYTA, LIME, *and their salts. Symptoms. Treatment. Chemical evidence.*

OXALIC ACID, (*concluded.*)

GENTLEMEN:—Whatever is to be done when the oxalic acid has been taken, as a poison, with the view of saving life, must be prompt and decisive. The stomach-pump should be used; employing lime water, or a solution of chloride of calcium, largely diluted, instead of common water. Chalk and water should then be freely administered, as was first suggested by me. Magnesia may also be given; but not the alkalies, nor their carbonates, as these form soluble salts, which are nearly as poisonous as the acid itself. Although both the oxalates of lime and of magnesia are insoluble in water, yet they are formed in such fine powder as readily to be brought off by the stomach-pump; and the mixtures of chalk and water, and magnesia and water, should be administered freely; for it must be recollected that the secondary symptoms may occur from a small quantity of the acid remaining, and getting into the system. To allay the sufferings of the patient, a cataplasm of opium may be applied to the epigastrium: this is readily made by soaking a piece of the soft part of a loaf of bread in the officinal tincture of opium.

If collapse supervene, after the whole of the poison appears to be evacuated from the stomach, or neutralized, then the system must be supported, in the usual manner, by mild cordials, especially ammonia, until reaction take place; after which, local and general bleedings should be resorted to, in the same manner as if the poison had been a mineral acid. The advantages of this plan are illustrated in several cases on record.

One of the most instructive cases which I know, is the one to which I have already referred, communicated through the "Edinburgh Medical and Surgical Journal," by W. FRAZER, Esq., deputy-inspector of hospitals, Gibraltar. (See vol. xiv. p. 607.) In that case, ℥ss only of the acid was taken by mistake, instead of Cheltenham salts. The mistake was instantly discovered by the acid taste of the solution. The irritation experienced in the fauces and stomach induced the patient to take some water; and it is probable that to this natural act the fatal result of the case may be attributed, for the fatal issue did not take place until the thirteenth day after the poison had been swallowed; and it can only be ascribed to the introduction of the poison into the circulation, and its influence on the nervous centres. In this unfortunate case, an error was committed in the commencement of the treatment. As the poison was discovered to be an acid, alkaline medicines were supposed to be indicated, and spirit of hartshorn being at hand, two doses, largely diluted, were administered. Now, oxalate of ammonia is fully as poisonous as oxalic acid itself. In the experiments of Dr. CHRISTISON and Dr. COINDET, a strong cat was killed in nine minutes by ninety grains of this oxalate, which contains thirty-six grains only of oxalic acid.

In Mr. FRAZER's case, as considerable pain was caused in the fauces and gullet by the hartshorn, magnesia was next administered;

it procured immediate relief from the sensation of burning at the stomach, and was followed by vomiting of a curdy matter. The magnesia was repeatedly given, on the return of pain or spasm, until upwards of two ounces had been taken; nevertheless, the vomiting continued, and the matter vomited was not only tinged with blood, but in an hour after the poison was swallowed, a large quantity of pure blood was thrown up, evincing the extent of the local injury on the stomach. The tongue, as usual, was swollen, and as if scalded; respiration was oppressed; and the collapse was so considerable, that the pulse was scarcely perceptible, either at the wrists or at the temples; whilst, at the same time, the nails appeared livid; and every thing seemed to threaten immediate dissolution. In this condition of the sufferer, hot fomentations and frictions were assiduously employed, and in less than two hours he seemed out of danger: he was perfectly easy, and voided his urine naturally. Reaction, however, gradually displayed itself; and in less than three hours more, the pulse rose to 120, although it was small; the pain of the stomach returned, with a tingling sensation in his fingers; and he evinced a peculiar quickness of manner; symptoms which evidently demonstrated that the poison was already extending its influence to the brain. The symptoms varied considerably until the 22d of the month, the seventh day after the poison had been taken; when the patient was considered to be doing well, except that there was an occasional agitation in his manner; his mouth and fauces were parched; he had now and then hiccough; but his pulse and skin were nearly natural; and he was induced to take an airing in a gig, contrary to the directions of Mr. FRAZER.

Next day all the bad symptoms returned; the hiccough increased; the patient became more and more emaciated; his tongue was loaded; his deglutition difficult; his bowels were slow and griped; he was restless, and slept little. On the 26th he had all the symptoms of low fever, which continued to the 29th, when he expired. You may read the details of the post-mortem examination in the "Edinburgh Journal," vol. xiv. p. 611: they are short, but nevertheless extremely correctly drawn up.

I have had the management of several cases of poisoning by this acid, all of which recovered. When life is preserved, the symptoms continue long to torment the patient; they closely resemble those of gastritis. A case of this kind occurred in the *North Lond. Hospital*. The rule of treatment is in the first instance to evacuate the stomach as rapidly as possible, at the same time to neutralize the poison with chalk mixture; and afterwards to treat the case as one of irritable gastric dyspepsia, attended with symptoms of narcotism. I have seen no case in which the use of the lancet was indicated.

ACETIC ACID.

Acetic acid can scarcely be regarded as a poison when it is taken in the diluted state in which it is found in vinegar; but in its concentrated form its acrid powers are obviously displayed, even when it is externally applied; and, when taken into the stomach, we might anticipate its virulent influence. The only case of poisoning by it, with which I am acquainted, is detailed in the sixth volume of the "Annales d'Hygiène et de Méd. Leg.," p. 159. The subject of it was a young woman, nineteen years of age, residing in Paris, who was pregnant, and had been deserted by her lover. On the night of the 11th of May, 1831, at eleven o'clock, this young woman was observed in the street, in a condition which resembled intoxication. At half-past three o'clock on the following morning, she was seen lying near the wall of a wine-merchant, in the Rue Gentilly; at four o'clock, those who found her gave her some warm wine and milk, sweetened; she was in strong convulsions, and complained much of her stomach; these symptoms increased, and in a short time afterwards she died. MM. MURAT and LEMIS opened the body. They found the cavity of the mouth and the nostrils filled with a frothy liquid, of a light-brown colour, which had not changed the tissue of the skin. A similar liquid flowed from the mouth, to the extent of from two to four ounces; it exhaled a slight alcoholic odour. The mucous membrane of the cheeks and the palate appeared natural; that of the tongue, especially towards the centre, was hardened, and brownish, and the papillæ were much elevated. The same appearances were displayed, with more intensity, in the œsophagus, which was of a blackish-brown colour. The stomach was distended, and seemed filled with a liquid; towards the pylorus it was of a violet colour, passing into an almost black tint. This colour was diffused in patches over the whole of the mucous surface. The stomach was filled with a dark-brown fluid, having a slightly fœtid odour, which displayed an acid re-action. The quantity was from eight to ten ounces. The inner coat of the stomach was covered with a closely-adhering brown membrane, most tenacious near the pylorus. At the great end of the viscus, black patches, of different sizes, were discovered, besides several egg-shaped indurations, a third of an inch in diameter, and of a black colour; and this extended to all the coats of the organ. All the vessels were strongly injected with coagulated blood, which, in truth, was the origin of the ovoid indurations, which were kinds of ecchymoses. The tunics of the stomach were not generally softened, but in many respects the pathological changes closely resembled those caused by sulphuric acid.

The symptoms caused by strong acetic acid closely resemble those of poisoning by sulphuric acid.

In investigating the nature of the poison, if any remain, it is readily recognized by its odour and taste; but when only the contents of the stomach, or vomited matters, are found, the first step is to filter the fluids, and distil them from a chloride of calcium bath. The distillation should be carried to dryness. The product must then be accurately saturated with carbonate of potassa, and the solution evaporated to dryness in a water-bath. The salt thus obtained should be next put into a retort, with half its weight of sulphuric acid, and the product of the distillation collected in a receiver, kept very cool. This will be found to be acetic acid.

The treatment, when the patient survives, is the same as that which is indicated in cases of poisoning by the mineral acids; but bleeding and counter-irritants are both requisite. Magnesia, or soap, may be regarded as the best antidote for the poison of acetic acid.

POISONING BY ALKALIES AND THE SALTS.

MINERAL ALKALIES AND CARBONATES.

Although, as Dr. CHRISTISON has justly remarked, there are no recorded cases of poisoning by caustic, or pure, alkalies, yet there are no reasons why these may not happen, therefore we ought to be provided with means to recognize those poisons, and to relieve the symptoms caused by them; and this knowledge is readily attained by observing the effects of large doses of their carbonates, by which several fatal cases of poisoning have occurred. The difference of action between the pure alkalies and their carbonates consists solely in degree.

In two cases in which half an ounce of carbonate of potassa was administered by mistake for tartrate of potassa, to two young ladies, detailed in the seventh volume of the "Medical Repository," the following were the symptoms:—

Soon after the dose was swallowed, violent sickness supervened, which continued, at intervals, until the death of the sufferers. The eldest of the sisters, who was sixteen years of age, complained, on the first day, of great pain of the epigastrium, which was relieved, for a time, by leeches applied on the pit of the stomach; and the same relief followed their re-application, two days afterwards, when the pain recurred. Sedatives moderated the sickness, but it still occasionally returned, and it continued more or less to recur for two months, when the patient expired.

The youngest sister, who was twelve years of age, was sick during three days at first, after which, on bathing in the sea, she was relieved; but on returning to London, three weeks afterwards, the sickness was renewed, and she died at the end of four months.

On opening the body of the eldest, the peritoneum displayed an unusually deep colour, as did also the omentum, the vessels of which were highly injected. In the post-mortem examination of a patient who died of ovarian disease whilst she was taking large doses of liq. potassæ, similar appearances of the peritoneum were observed. The intestines adhered by thin threads of coagulable lymph, and exhibited gangrenous spots scattered over them. The villous coat of the stomach was completely disorganized, and the pylorus ulcerated, and so plugged up with coagulable lymph as scarcely to admit a probe to pass. The right lobe of the liver was of a dark-green hue; the gall-bladder was greatly distended with bile, and the biliary ducts were obliterated. The dissection of the younger sister presented nearly the same appearances, except that there was gangrene. The pancreas appeared as if affected by scirrhus. In a case detailed in PLENCK's "Toxicologia," and quoted by Dr. CHRISTISON, an ounce of the carbonate was swallowed by a man, who recovered. The symptoms were those of acute gastritis, and the recovery was rapid and complete. In a case which occurred in Paris, and is detailed by ORFILA and CLOQUET, the following were the symptoms:—

A young washerwoman took, by mistake, a table spoonful of deliquesced American potash; she instantly experienced a sensation of burning, from the mouth to the stomach, and constriction of those parts; nausea, vomitings, severe and painful; extreme anxiety, great tenderness of the epigastrium; cold sweats, tremors of the limbs, constant hiccough, faintings; and the separation of the epidermis of the tongue, the lips, the cheeks, and the palate. Four minutes after the accident she drank a large quantity of milk and oil, which afforded her some relief; but the hiccoughs and vomitings continued during the whole day; they were accompanied with purging and violent colic; the stools contained black shreds and blood, and they were in number from 36 to 40 in the twenty-four hours. On the following day some of these symptoms subsided; but fever supervened, with rigors, cold extremities, vomiting, and hiccoughs, and she ultimately died of marasmus. This case displays, in a very clear point of view, the progress of the symptoms, and the result was such as usually occurs when poisoning is the consequence of caustic poisons.

When the dose is large, the fatal issue may happen within twenty-four hours. A case of this kind is detailed in the "Edin. Med. and Surg. Journal," vol. xxx., by Mr. DEWAR, of Dumferline. The sufferer, a boy, swallowed ℥iiij. of a strong solution

of carbonate of potassa, and died in twelve hours. In this instance the principal injury was suffered by the œsophagus, the lining membrane of which was completely disorganized, and reduced to a pulp, with blood extravasated on the muscular coat. The stomach displayed only redness, and two round disorganized patches, covered with a clot of blood. The same gentleman relates a case in which death did not take place for four months, and in which, after the violence of the first symptoms had abated, sloughs separated from the gullet and the lining membrane of the mouth; and this seemed to be the principal cause of the fatal issue, kept up, however, by intemperance in spirituous liquors. But, in general, chronic inflammation is set up, serous derangement of the mucous surface takes place, and death finally occurs, from inanition.

As in the mineral acids, it may happen that the alkalies do not reach the stomach, but destroy either by starvation or by a sympathetic influence on the general system, from the extent of injury to the gullet. Sir C. Bell has given a plate of a stricture of the œsophagus, caused by swallowing soap-lees. The patient died of starvation, we are told, at the end of twenty years,—a long period, indeed! He details another case, from the same cause, which terminated in a short time by mortification of the gullet; and a third, of a child, who, in her mother's absence, also swallowed soap-lees, which caused inflammation, stricture, and death, from total defect of the power of swallowing.

On reviewing the recorded cases, we may conclude that, when we are called to a case of a person who is suddenly attacked by the following symptoms, there is reason for suspecting that it is a case of poisoning by an alkali, or the carbonate of an alkali.

1. An urinous taste, followed by a burning sensation in the mouth and œsophagus, succeeded by constriction of the latter, with difficult or painful deglutition; violent, long-continued vomiting of matters which have a greasy or saponaceous appearance, and do not effervesce if they drop on a marble hearth; which tinge vegetable reds, green, or restore reddened litmus paper to blue, or deepen the colour of infusion of rhubarb; violent pains at the epigastrium; colic, diarrhœa, the stools being sometimes bloody, sometimes composed chiefly of dark, membranous flakes. Such are the symptoms of poisoning by the alkalies; but although the administration of large doses, given for the first time, produce them, yet it is astonishing to what an extent the stomach can be brought to bear these poisonous agents, when the doses are gradually increased. I have given ʒij. of liquor potassæ three times a day, sheathed in a mucilaginous demulcent, for several weeks, with perfect impunity, in psoriasis.

The principal distinction between the effects of the alkalies and the strong acids, which can alone be depended upon, is the influence of the vomited matters on tests. The cases which I have quoted display the nature of the appearances which are to be looked for, on the examination of the body, when the poison proves fatal. The chemical evidence is founded on the aspect of the portions of the poisons, found either in a crystalline or a solid state, or in solution. It is not likely that any of them would be swallowed in a solid form; but a portion might be left.

1. Pure potassa is generally in a white, semidiaphanous mass, rapidly deliquescing, with a very caustic, urinous taste.

2. Carbonate of potassa is usually in small white granules, deliquescent, but less so than the pure alkali, and inodorous; its taste strong, urinous, and disagreeable, and it effervesces with acids; in its impure state, the pearlash of commerce is less white, and effervesces feebly, owing to its containing sulphate of potassa, and oxides of iron and of manganese and silex.

3. Carbonate of soda,—a white semi-transparent salt, in large crystals, which are varieties of the oblique rhombic prism; inodorous, and less urinous and disagreeable to the taste than carbonate of potassa; it effloresces in the air.

In solution, these alkalies taste urinous, and feel soapy between the fingers; they brown turmeric paper, redden infusion of rhubarb, restore reddened litmus to blue, green, and infusion of red cabbage, and are distinguished from the alkaline earths by browning pure tannin, and not being precipitated by carbonic acid. But by these means we merely recognize them to be alkalies. In legal investigations it is of importance to point out which of the alkalies has been employed; and, in a state of solution, this can only be done by chemical tests. Potassa is known by its *positive*, soda by its *negative* properties.

1. Potassa is distinguished from soda by, first, forming with tartaric acid a precipitate of bitartrate of the alkali; secondly, by its affording with nitrate of silver an olive-coloured precipitate, soluble in nitric acid; thirdly, by the concentrated solution precipitating hydrochlorate of platinum, brown-yellow (this is a double chloride of potassium and platinum), and by forming a yellow crystalline precipitate with carbozotic acid, which requires 260 times its weight of water to dissolve it. It must be recollected, however, that carbozotic acid throws down a yellow precipitate in water; it is only when the precipitate is in shining crystals that we can affirm it to be a carbo-

zotate of potassa. Sometimes both this test and the chloride of platina precipitate very slowly.

2. Soda is distinguished by producing none of these results with re-agents, except that with carbozotic acid; but the crystals are soluble in twenty-four parts of water. The only direct method of testing it is to heat the suspected substance on the end of a platinum wire, by a lamp urged with the blow-pipe: the cone of flame will be a deep yellow at the apex if the salt be soda.

If we have only the contents of the stomach to operate upon, or any mixed fluid in which the poison has been administered, our first step is to ascertain the presence of an alkali, in the manner already detailed. The fluid is then to be evaporated to dryness, in a platinum or silver capsule, and if it do not effervesce with acids, it should be taken up with boiling alcohol, and, having evaporated the alcoholic solution, we must next dissolve the residue in distilled water, and pass through it a stream of chlorine gas, until it be freed from colour; the solution is then to be concentrated, and tested with hydrochloride of platinum and carbozotic acid. It might be supposed that fallacies would arise, from many salts of potassa being contained in animal matters; but these do not display an alkaline reaction, and although it is true that many animal juices are alkaline, yet they owe that to soda.

When we have to act merely on portions of dissolved tissue of the stomach, the œsophagus, or the mouth, we must boil those solid matters in water, filter, and then test, as already described; and the same process is necessary when we have cloth, or similar bodies, to test.

Treatment.—If we are called in soon after the poison has been taken, and the injury to the gullet admits of the introduction of the tube of the stomach-pump, that should be used, vinegar and oil being mixed with the water employed. If this cannot be done, vinegar, or lemon-juice, or diluted sulphuric, or diluted muriatic acid, may be freely administered at first; then bland oil in a large quantity; and the inflammatory symptoms should be treated, as in a case of gastritis, by leeching and cupping on the epigastrium. No food should be attempted to be given by the mouth until every trace of inflammation be subdued, and then only milk, solution of arrow-root, Irish moss, or such like.

AMMONIA.

It is scarcely probable that ammonia would be employed as a poison by the suicide; and the sensible qualities of the substance are too well known to admit of its being resorted to as an instrument of death by the murderer. But instances are recorded (and they may again occur), in which it has become the cause of death, from the indiscretion of those who are ignorant of its influence. Several fatal events have taken place from holding ammonia to the nostrils in faintings, or other states which were supposed likely to be benefitted by the application of a powerful stimulant to the nostrils. The symptoms which such an imprudent use of this volatile stimulant causes are, dyspnœa, with severe pain of the throat and chest, great difficulty of deglutition, hard cough, and copious expectoration, the discharge of much serous fluid from the nostrils, excoriation of the tongue, and a burning heat extending from the mouth to the stomach. Large doses of liquor ammoniæ have, also, been accidentally administered, and produced fatal effects. The chief distinction between the action of ammonia and the alkalies consists in the disturbance excited in the spinal system, such as tetanic spasms and convulsions. When such symptoms as these occur, and when ammonia has been held to the nostrils, there need be no hesitation in ascribing them to its influence. If the case prove fatal, and an opportunity of examining the body be afforded, the nostrils, as well as the mouth, larynx, pharynx, and bronchi require to be examined; they are generally found to be blocked up with albuminous matter, whilst the air-passages of the lungs are mottled with patches of lymph, and the gullet and stomach streaked with red, indicating inflammatory action to have been excited in those parts. The spinal cord, or, rather, its theca, is also found in an inflamed condition. In such cases, even when the termination is fatal, death often does not take place for many hours after the application of the stimulus.

When these accidents occur, chlorine, much diluted, may be inhaled, and distilled vinegar administered, as antidotes. The first forms muriate of ammonia, which is much less exciting than the ammonia; the second forms, with the solution of ammonia, the solution of the acetate, which is not poisonous. In the next place, the most vigorous antiphlogistic measures must be resorted to,—bleeding and counter-irritation, with a free use of demulcent diluents; in truth, when the ammonia is inhaled, the case must be regarded as one of acute bronchitis, and it should be treated in the same manner as that disease, to afford the only chance of saving the patient.

The carbonate and sesquicarbonate are less volatile than ammonia, and, consequently, they are not likely to produce such alarming and dangerous effects when inhaled, but their effects are the same when they are introduced into the stomach. The odour of ammonia is so well known, that it scarcely requires any other test; but as the evidence of the senses is always objected to in a court of justice, we must have some other means of verifying the fact. The best is, the introduction of the mouth of a small flask containing chlorine gas, into the phial which

contained the poison, or if that cannot be found, the inversion of such a flask of chlorine into the glass into which the liquid had been poured. If any of the ammonia, or its carbonate, remain, it will be immediately decomposed; its hydrogen uniting with the chlorine, muriatic acid is formed, and this combining with the undecomposed ammonia, an opaque muriate is produced, and deposited in crystals on the sides of the phial, or the glass.

NITRATE OF POTASSA.

When Glauber salts were much employed as domestic purgatives, nitre was occasionally swallowed by mistake for them, in the same manner as oxalic acid is now taken for Epsom salts, which have supplanted the sulphate of soda.

The general effects of a dose of an ounce of nitre is nausea, cardialgia, and vomiting, soon after the salt is swallowed; sometimes of blood, either in a fluid or a coagulated state; these symptoms are succeeded by others, closely resembling those of Asiatic cholera, namely, cold, clammy perspiration, or, rather, sweats, cramps, convulsions, the most complete collapse; and unless relief be speedily procured, death is the result.

When the fatal event does not soon take place, a nervous affection, very closely resembling chorea, displays itself, accompanied with paralysis of the lower limbs, and not unfrequently with tetanic convulsions. Although from these effects it is evident that the nitrate of potassa is taken into the circulation, and excites, powerfully, the cerebral and spinal centres, yet in small doses nitre operates merely as a diuretic and moderate stimulant. In such doses as we have been speaking of no influence whatsoever is experienced on the kidneys. In cases of disease, when nitrate of potassa has been administered in moderate doses, frequently repeated, an ounce, and even two ounces, have been taken in the course of the day, without any injurious effects. M. Devilliers has also ascertained that very large doses may be given with impunity, if the salt be dissolved in much water.

The quantity of nitre required for producing a fatal result has not been accurately ascertained. In the experiments of Dr. Alexander, made on himself, to determine this question, he took ℥iss dissolved in f ℥iv of water, every 90 minutes. After the third dose, chilliness and stinging pains in the stomach were felt, and these increased so much after the fourth dose, that the Doctor began to feel alarmed, and discreetly terminated the experiments.

In a case detailed by Comparetti, ℥iss was taken by mistake, and caused death in ten hours. Souville has recorded a case, in which ℥iss caused death in sixty hours.* Gmelin mentions a case of a child who was killed by ℥vj of nitrate of potassa, and two of cream of tartar. Laflize† has recorded the case of a lady, who was destroyed in three hours, by one ounce of nitre in solution; and many cases of the same description may be perused in Orfila's "Toxicologie Générale."

Some years since, I witnessed the effects of taking an ounce of this salt instead of an ounce of Epsom salts, in a man of a full, plethoric, habit of body. The general symptoms were those which I have described; the most striking were the cold, clammy sweats, and extreme prostration of strength. This patient recovered the first effects of the poison, but three weeks elapsed before the cerebral derangement which succeeded was meliorated, and he afterwards continued paralysed on one side of the body.

Several cases are on record, however, in which ℥j was taken, and complete recovery followed; and in a case mentioned by Tourtelle, and another by Mr. Falconer, two ounces were swallowed, and, nevertheless, the patients recovered. Dr. Christison also says, "A gentleman of my acquaintance once took nearly ℥j by mistake for Glauber salts, and retained it above a quarter of an hour; nevertheless, except several attacks of vomiting, no unpleasant symptom was induced."† The most remarkable instance with which I am acquainted, is one recorded by Mr. Rutter, in the "Edinburgh Medical and Surgical Journal," vol. xiv. p. 34, ℥ij of nitre were taken instead of ℥j of Epsom salts, by the wife of the quarter-master of the South Devon Militia, on the 11th of March, 1815. She suffered more or less until the 24th, when she was considered to be quite recovered, and no miscarriage (for she was pregnant) had taken place.

The examination of the body, after death from poisoning by nitre, displays the villous coat of the stomach much inflamed, generally to such a degree that that tunic can be detached; and this condition of the organ even extends to the peritoneal covering, which appears of a dark-red hue, speckled over with black spots. These appearances of inflammation extend, more or less, to the other intestines.

Although such is the influence of nitre on the human animal, yet you should be aware that this is one of those poisons which act very differently on quadrupeds; thus, Orfila ascertained that gr.iij of it will kill a dog; and even when externally applied in small quantities to wounds, both in dogs and in the deer, gangrene is rapidly produced, and death follows.

The evidence to be obtained by chemical aid, in such a case, is very conclusive. If any of the poison remain in a crystallized

* Journ. Gén. de Méd. lxxiii. 1787.

* Dict. de Médicine et de Pharmacie, vol. lxi.
† Treatise on Poisons, 1st edit. p. 161.

state, it may be either in compact morsels, of a snow-white appearance, in which is found nitre, or sal prunelli, or in white semi-pellucid, six-sided prismatic crystals, terminated by two converging planes. In this respect it closely resembles oxalic acid, but the taste at once discovers the difference. The salt is inodorous, and has a saline, cool taste, followed by an acrid sharpness. If thrown upon incandescent coals or charcoal, it deflagrates; and if put into a tube, and strong sulphuric acid be poured on it, and the tube heated, nitric acid fumes are produced by the decomposition of the salt; and if a particle of morphia, or any of its salts, be added, a red colour results from the action of the nitric acid extricated on the morphia. If none of the crystallized salt be found, but merely some of the solution, or the contents of the stomach, in both cases, after filtering, the fluids should be evaporated to dryness; some charcoal should then be added, and the mixture deflagrated. These effects are sufficiently characteristic to enable us to pronounce with accuracy as to the nature of the poison. Further proofs may, however, be obtained. If the solution be concentrated and put into a watch-glass, sprinkling some morphia on the surface, and a few drops of sulphuric acid be allowed to trickle down the side of the glass, so as not to touch the morphia, if the salt be nitre the morphia will be reddened. That it is not nitrate of soda is proved by a precipitate being formed by hydrochlorate of platinum; and fumes procured by boiling the solution with sulphuric acid, deepening proto-sulphate of iron, demonstrate that nitric acid is present. Hence the salt must be nitrate of potassa.

The treatment to obviate the effects of poisoning by nitre is dictated by the same views which regulate those by other acrid poisons. The first object is to free the stomach from the offending matter; hence the stomach-pump must be resorted to; and in using it, the employment of milk and water is to be preferred to that of pure water. The next object, after thus clearing the stomach, is to subdue inflammation; but here some difficulty stands in the way of adopting rigorous antiphlogistic measures, on account of the great depression of strength which suddenly follows the primary action of the poison. If bleeding be resorted to, which is not always requisite, the lancet should be sparingly employed, and leeches or cupping over the region of the stomach substituted for it. The strength should be supported by nourishment rather than by excitant or tonic medicines; and in selecting the food, reference should always be had to the local influence of nitre on the tissues to produce gangrene. Small quantities of beef-tea, mixed with arrow-root, with a few drops of tincture of opium added to it, I have found more serviceable than any other nutriment. The food should also be supplied in small quantities, at very short intervals, for, in all these cases, the bad symptoms are invariably augmented when the stomach is empty. After all risk of the tendency to gangrene, or other equally hazardous terminations of inflammation, has subsided, the strength may be brought up, and the spasmodic symptoms, which more or less continue, subdued, by pure tonics, such as Columba root and Peruvian bark, administered in the simplest form, namely, that of decoction. The salts of quina, or of cinchonia, or the aromatic vegetable tonics, are inadmissible. When symptoms closely resembling chorea supervene, they are to be subdued by the same means as are required in that disease, especially by carbonate of iron, and the best method of administering it is by decomposing the sulphate of iron in solution, by a solution of bicarbonate of soda at the moment of taking the dose.

BARYTA, LIME, &c.

Baryta, lime, and their salts, all operate as poisons on the living system; but the only one of these agents that particularly requires our attention is the chloride of barium, or hydro-chlorate of baryta. This substance has, nevertheless, been lately regarded as not poisonous by M. Andral and Lisfranc, who have given grs. xl for a dose, without any injury to the patient. The poisonous properties of it are, however, undeniable; and although it is not likely to be wilfully employed as a poison (and it is not sufficiently known to become an instrument of murder), yet it requires attention, as accidents have occurred from over-doses of the salt, when employed as a medicine; and one case of death from swallowing an ounce of it by mistake, for Glauber salts, is recorded in the fourth volume of the "Journal of Science." The person was a girl. The instant she swallowed the solution she exclaimed that she was on fire; vomitings, convulsions, pain in the head, and complete deafness supervened; and death occurred within an hour after the poison was swallowed. No post-mortem is detailed. In instances where over-doses have been taken, the symptoms are, vomiting, copious purging, generally without tormina, excessive debility, and temporary paraplegia. In some cases, however, the purging is attended with severe griping.

The action of this poison greatly resembles that of oxalic acid in several respects; it seems to be two-fold, *local* and *general*. The first influence of the poison is undoubtedly exerted on the tissue of the stomach itself, on which it operates as an irritant, inflaming the mucous coat of that organ, and destroying its vitality; the second is felt in the nervous centres, displaying appearances closely resembling those of narcotic poisons. The voluntary muscles, in experiments made by Gmelin, lost their contractility imme-

diately after death; yet the heart continued to contract vigorously for some time, even without the application of any excitant. It is a curious fact, that the carbonate of baryta, although an extremely insoluble salt, operates as a poison nearly in the same manner as the hydrochlorate. No correct information has been obtained respecting the evidence to be obtained by post-mortem examination of the body, in cases of poisoning by hydrochlorate of baryta, as no account of the dissection of the human subject, under such circumstances, is on record, that I am aware of. In quadrupeds poisoned by it, inflammation of the stomach is indicated by a deep reddish-black colour of the villous coat, and spots of extravasated blood diffused through it: the brain and its meninges have been found much congested.

The chemical evidence is more satisfactory. If any of the solution remain, it is precipitated by the sulphates of alkalies. The precipitate is insoluble in nitric acid; and, when acted on by muriatic acid, after being heated in platinum foil, it displays the same action on paper moistened with acetate or carbonate of lead, as was demonstrated in testing for sulphuric acid. The solution of the hydrochlorate is distinguished from that of the other sorts of baryta, by throwing down a white precipitate of muriate of silver, when solution of nitrate of silver is dropped into it. If we obtain only the contents of the stomach, they must be decoloured by chlorine gas, diluted nitric acid then added to them, and the whole filtered. The filtered fluid should next be precipitated by a sulphate, the precipitate collected, dried, and treated in the same manner as if we were testing the pure solution. An additional proof may be obtained by testing the solution with hydro-sulphuret of ammonia, which does not precipitate the salt, although it affects in this manner all the metallic poisons.

With regard to the treatment of cases of poisoning by hydrochlorate of baryta, if we are called early enough, and have any knowledge of the nature of the poison, the first thing to be done is to neutralize the poison by converting it into the sulphate, which is perfectly inert. This is readily accomplished by the administration of sulphate of soda, and by extending the dose beyond the quantity merely requisite to produce the decomposition; on repeating it at short intervals the whole of the poison may be readily removed from the system, and the person treated afterwards according to the symptoms which present themselves. In such cases, if the dose of the poison have been large, the violence of the local action scarcely admits of the employment of the stomach pump, on account of the injury done both to the gullet and the stomach. When the symptoms of narcotism display themselves, these must be met in various ways, according to the effects which they present. Our experience in cases of this kind in man is too limited, however, to permit us to lay down any rules with respect to general treatment; each individual is likely to require different means, and, consequently, every thing will depend on the discretion and judgment of the practitioner. It is scarcely necessary to say, that in the medicinal administration of muriate of baryta, and of similar poisonous agents, it is highly reprehensible to prescribe the remedies in such a manner that, should a mistake occur, hazard of life may be the consequence. In all such cases the medicine should be so prescribed that the proper dose only can be taken.

LECTURES
ON THE
PHYSIOLOGY OF THE NERVOUS SYSTEM,

DELIVERED IN 1836, IN THE COLLEGE OF FRANCE

By M. MAGENDIE.

Lecture XXI.

Hearing (*concluded*). Taste:—*Experiment before performed on the auditory nerve. Effects of division of the chorda tympani. Mutual dependance of various functions on each other. Effect of division of the fifth nerve, in a rabbit, on the eye, the nose, and the ear.—The sense of taste. Parts of the mouth which develop it. Anatomy and functions of the three nerves which are distributed to the tongue. Errors of Panizza. Effect of division of the fifth pair on the tongue. Division of the glossopharyngeal in a dog.*

Gentlemen:—The object of the last experiment which I made before you, was to determine whether the auditory nerve is really the nerve of hearing, as is generally supposed to be the case. You remember the accident which prevented us from following up the experiment. I have taken care to prepare the parts of the animal on which it was performed. Here they are, before you. The auditory nerve has been completely divided on the left side; but, on examining the opposite nerve, I find only a portion of the trunk has been separated. The experiment is therefore imperfect, and must be repeated again, with more caution, before we can draw any rigorous conclusion from the results obtained.

Here is the carcass of a second dog, on which I performed an experiment, whose object was quite of a different kind. You remember what I said of the connexity which exists between the sensibility of the nerve called "chorda tympani," and the integrity

of the fifth pair. I wished to ascertain directly how far such connexity existed, and I divided the fifth pair within the cavity of the cranium; but, in consequence of some accidental deviation of the instrument, a considerable hæmorrhage took place within the skull, and the animal soon died; this fact, also, must be regarded as proving nothing for or against the theory.

Here, however, is the carcass of a rabbit, on which the experiment was performed with better success. You remember, without doubt, that after the complete division of the fifth pair of nerves, on one side of the head, the external parts of the ear on that side continued to exhibit marks of sensibility; but this phenomenon includes nothing so very remarkable; for every anatomist knows that the parts of the ear just mentioned are supplied with nervous filaments from other nerves as well as from the fifth. It now remains to determine whether the internal parts preserve their sensibility after the division of the chorda tympani, the fifth nerve remaining intact. No; in this case, also, the membrane of the tympanum and the neighbouring parts give no sign of their being sensible. Thus, you see, I introduce a blunt probe into the ear, strike the membrane, and irritate the parts, without disturbing the little animal in the least. I have even perforated the membrane with my probe, and the rabbit remains, as you see, impassible: on the opposite side of the head, the slightest touch is enough to bring the general sensibility into play. This experiment, gentlemen, does not entirely settle the question we have been discussing: however, you may safely conclude, from all the facts you have witnessed, that the sensibility of the membrane of the tympanum, and of the chorda tympani, is intimately connected with the integrity of the fifth pair of nerves.

We have now to examine the sense of taste; but, before I enter on that part of the subject, allow me to develop some general considerations on what we have already seen. It is not sufficient for the exercise of a sensation that an isolated sense be placed in communication with the external world, as the idealogists teach: the operation is a more complicated one; and no sensation takes place without the concurrence of a certain number of organs, which functionise together, and are mutually dependant one on the other. The speculations of DESCARTES on the seat of each faculty in the brain, can be of little or no value to the medical man, who, far from being called on to speculate at the bed-side of his patient, is, on the contrary, forced to collect all his practical knowledge, and apply it with the sole object of obtaining a cure. For the latter, a thorough acquaintance with the functions of the different senses is indispensably necessary; and, as you have seen from the numerous experiments we performed before you, it would be quite impossible to study those functions with any degree of advantage, unless we first made ourselves acquainted with the influence which the fifth nerve exercises over the rest of the cerebral nervous system; the degree of that influence, its extent, and constancy.

The experiments we have performed before you, on the nerves connected with the senses of smelling, seeing, and hearing, sufficiently demonstrate the truth of what has just been said, and show how remarkably the functions of the several organs of sense are modified by any injury of the fifth pair,—are completely annihilated by the destruction of the latter, and are more or less weakened and imperfect whenever the lesion of the fifth nerve is of such a nature as to interrupt only a part of its influence.

At the conclusion of our last lecture, you had an opportunity of examining an individual labouring under an organic affection of the fifth nerve at the left side of the body. You saw how all the senses on that side were weakened and modified; the sensibility of the ear, of the external auditory foramen, of the membrane of the tympanum, of the nostril, the conjunctiva; and the skin on that side of the face, was either considerably weakened or entirely destroyed. Here, then, is a case, and we might easily multiply them if necessary, which proves the truth of what we have advanced, in the most satisfactory manner. Pathological observations, indeed, do not always furnish us with facts of so remarkable and striking a nature; however, every one must allow that when pathology comes in and verifies the result of experiment, we have attained as high a degree of certainty as the nature of medicine will admit.

Here is a rabbit on the table, in which, five or six days ago, I divided the fifth pair of nerves; on the right side the sensibility of the face has been completely lost; the eye is quite insensible to the touch; the cornea, as you see, has become opaque. The first attempt made at dividing the nerve on the left side failed; but a second experiment, performed since then, seems to have been more successful, for the animal now exhibits no signs of sensibility when the eye or nostril on that side are irritated. Let us see what effect the section of the fifth nerve has had on the sense of hearing: the rabbit ought to be deaf; but, as I said before, it is extremely difficult to determine this exactly in animals.

[Here M. MAGENDIE made as loud a noise as possible near the animal's head, without producing any symptoms of fear or alarm; the rabbit remained quite at its ease.]

I have (said M. MAGENDIE) at the present moment a young soldier in my wards, at the *Hôtel Dieu*,—he is completely deaf, and I shall take an opportunity of showing you

the case, and directing your attention to the state of the fifth pair, which much more frequently than medical men imagine, is a principal cause of derangement in the functions of our senses. But let us pass to an examination of the sense of taste.

The first observation that I would make in reference to the sense of taste is, that its limits are not very precisely marked in the organ by which it is exercised, and, moreover, that the sensation produced by one and the same substance seems modified, according to the particular portion of the organ with which it is placed in contact.

The seat of this sense, as you all know, lies in the interior of the mouth, but the buccal cavity comprehends a great variety of parts, and some of these are destined more for mastication and deglutition than for taste, while others exercise a well-marked action in the perception of sapid bodies. All physiologists agree in regarding the tongue as the principal organ of this sense; however, it is, beyond doubt, that the lips, the internal surface of the cheeks, the teeth, the pharynx (and, perhaps, the œsophagus and stomach), are susceptible of receiving impressions from the contact of sapid bodies. The palate is one of the least sensible; and the vulgar observation, "fine palate, delicate palate," is, in this case, opposed to true physiology. Our next observation refers to a point connected with the anatomy of the nervous system of the organ of taste; you know that the tongue receives no less than three distinct cerebral nerves on each side, viz., the lingual branch of the fifth, the hypoglossal, and, finally, the glossopharyngeal nerves. Authors generally consider the last of these nerves as the special agent of taste; the second, or hypoglossal, as the nerve which presides over the movements of the tongue; and the first, or lingual, branch of the fifth, as a nerve of general sensibility. But, let me ask you, what faith can we have in the mere assertion of authors, unsupported by facts? What proof do these writers advance in support of such an hypothesis? None. The method which we profess, Gentlemen, is one of a different kind; and the result of numerous experiments has convinced me that the lingual branch of the fifth nerve, instead of being, as authors say, destined to communicate general sensibility, is, on the contrary, the special nerve of the organ of taste. We cannot pretend, in a course like this, to enter into minute anatomical details, even where such an examination would be most useful: however, it is indispensable to say a few words on the anatomical disposition of the nerves distributed to the tongue, before we can speak of their functions.

[Here M. MAGENDIE suddenly broke the thread of his discourse to remark, that the rabbit in which he had just divided the fifth pair of nerves, seemed to execute certain movements, rendering it probable that the nerves had not been completely divided. He called to mind the fact, that on every occasion, without exception, when both nerves were completely destroyed, the animal remained with the head inclined downwards, and the point of the nose closely applied upon the ground; here, on the contrary, the little animal (which was allowed to remain on the table) kept the head constantly elevated. M. MAGENDIE introduced the instrument with which he performs this experiment, a second time, and, apparently, with full success, for the animal immediately lowered the head, and assumed the position above indicated.]

But to return to our subject. We were speaking of the three nerves distributed to the tongue, and I mentioned my own opinion to be, that the lingual branch of the fifth is really the nerve of taste. This branch, a division of the inferior maxillary nerve, descends obliquely from the foramen ovale, at the base of the cranium, towards the submaxillary gland, underneath which it winds, giving it several filaments; the branch then dips between the muscles of the tongue, and, continuing its course towards the point of that organ, breaks up into numerous filaments, which are distributed in the mucous papillæ about the point and anterior part of the organ. The glossopharyngeal nerve is remarkable, not only on account of the part of the brain from which it arises, but from its mode of origin and subsequent connexions.

The glossopharyngeal nerve seems to arise by a double set of filaments, derived from the olivary and restiform bodies, where it lies close, over the radical filaments of the pneumogastric nerve, and below those of the facial; it appears at the edge of the medulla oblongata, between the bodies just mentioned, and gains the foramen lacerum, where it comes in contact with the pneumogastric nerve. On emerging from the foramen lacerum the glossopharyngeal nerve expands into a ganglion, which forms a central point of communication, as interesting, perhaps, as any that can be found in the whole nervous system; on the one hand it communicates with a branch of the vidian nerve, and on the other sends a filament of communication to the plexus of the tympanum; it is also united to the facial nerve, and to the eighth, or pneumogastric; in a word, it communicates, more or less intimately, with all the great nervous trunks which pass through the base of the cranium. We shall not, however, dwell on these, however interesting they may be in an anatomical point of view, because their physiolo-

gical applications are, as yet, unfortunately, extremely limited. The ultimate distribution of this nerve is far from leading to the idea that it contributes, in any marked degree, to the function of taste; a great number of its filaments are distributed about the pharynx, and those which pass to the tongue are all lost in the substance of the root of that organ, a part in which the power of discriminating sapid bodies is much more feebly developed than anteriorly. The disposition of the lingual branch, on the contrary, shows that its filaments are continued towards the mucous membrane, lining the point and anterior third of the organ; and though we may not be able to follow them, on all occasions, into the substance of the papillæ, they approach these latter bodies much nearer than the filaments of the hypoglossal or glossopharyngeal nerves.

We have still the hypoglossal nerve to examine; but no physiologist has ever thought of connecting that nerve with the sense of taste: it is distributed almost solely to the muscles of the tongue, and does not possess a single character which would lead one to regard it as a nerve of sense. You must not, however, think that in a question like the present we are content to conclude the functions of a nerve from its anatomy alone. That would be to abandon the method to which we are exclusively attached. No, Gentlemen; this, as well as the other points of physiology which we have already examined, must be determined by an appeal to experiment; and for this purpose we shall commence by dividing the glossopharyngeal nerve; but first I have a few words to say relative to certain ideas lately put forth on the functions of the nerve. M. PANIZZA has made a great number of experiments on living animals, from which he thinks himself authorized to conclude that the glossopharyngeal nerve is really the nerve of taste; but we can oppose to these, experiments just as numerous, and, as you shall judge for yourselves, more conclusive, which are at variance with the ideas of the Italian physiologists.

M. GUYOT, one of my pupils, made several experiments upon this question some years back; he enveloped the extremity of the tongue in an oiled silk bag, and then placed various sapid bodies in contact with the mucous membrane lining the middle region and root of the tongue. He performed this experiment on himself and on his friends; but most of the substances, though brought into contact with the palate, also were found to produce so little impression on the tongue as to be indistinguishable one from the other. But we need not refer to the experiments of M. GUYOT; this little animal before us, in which, if you remember, we have performed the section of the fifth pair of nerves, will serve to demonstrate the truth of what I advance. If the glossopharyngeal nerve were, as PANIZZA says, the special nerve of taste, this rabbit should be conscious of the presence of the salt I now place on the tongue; I even touch the organ with some acetic acid, yet the animal gives no sign whatever of his being sensible to the contact of this acrid body. Compare, now, the effects of these substances on a rabbit in which the fifth pair of nerves remains intact; the least drop of the acid applied to the tongue is sufficient, as you see, to produce disagreeable impressions, which the animal betrays by all sorts of movements; indeed the action of this acid is so deleterious, that a small spoonful of vinegar is enough to kill one of them.

Thus you see that division of the fifth pair of nerves determines loss of sensibility in the tongue; nay, more; one of the most direct and immediate effects produced by lesion of this pair of nerves is loss of the faculty of taste. We are not obliged to have recourse to experiments on animals for the purpose of proving this. You cannot have forgotten the individual we examined together at the termination of the last lecture; that man was a wine merchant, and it was only on discovering that he had lost all power of discriminating one species of wine from another that he became aware of the existence of a malady which subsequently terminated in paralysis of sensation of all the parts at the right of the face.

M. MONTAULT has for many years directed his attention, in a special manner, to the various lesions of the fifth pair of nerves, upon which he has furnished some very interesting memoirs; among other cases he mentions one in which the organ of taste was considerably atrophied, yet the faculty of distinguishing sapid bodies remained intact. The subject of this observation died, and, on examining the body, he found that a cyst had destroyed almost completely the hypoglossal and glossopharyngeal nerves, while the fifth pair and its branches were exempt from lesion. This is one of the most remarkable and conclusive facts that we possess in the history of the sensations: you see how completely it is opposed to the theory of PANIZZA on the functions of the glossopharyngeal nerve. We have now to ascertain what will be the result of dividing this nervous trunk within the cranium of a living animal. I should warn you of the difficulty of this experiment, which may possibly fail once or twice; you can easily conceive the reason on reflecting how closely this nerve is connected with important parts at the base of the brain, and the small space in which the operator can work. Let us first perform the experiment on the dead body.

[For this purpose the lecturer had the carcass of a large dog placed before him on the operating table, and effected, without any great difficulty, the complete division of the glossopharyngeal nerve on both sides.]

CLINICAL LECTURES AND REMARKS,

DELIVERED ON

DISEASES OF THE SKIN, VENEREAL DISEASES, AND *SURGICAL CASES*,

AT THE

SKIN INFIRMARY, AND AT THE JERVIS-STREET HOSPITAL, DUBLIN.

By Dr. WALLACE,

SURGEON TO THOSE INSTITUTIONS.

Reports of the second period of the case of M. D. Affection of her throat and skin. —REMARKS. *A description of the mild exanthematic affection of the throat, mouth, &c., &c.; its varieties in appearance and situation. The connection of this disease of the mouth and throat with condylomata, and other appearances on the skin: its diagnosis, from the pustular or excavated form of ulceration; from a state produced by mercury, &c., &c. Erroneous opinions of Mr. Hunter and others respecting this form of disease of the throat and mouth.*

GENTLEMEN:—In my last lecture (LANCET, page 335), on the venereal disease, I divided the case of M. D. into three periods; and, having read the reports of the first period, I concluded by making some remarks on them, and more particularly on the nature and mode of growth of the appearances called condylomata. I shall now consider the second period of the same case. During this, which occupied nearly two months, the throat and mouth, and cutaneous surface of the patient, became diseased. I shall first read you the reports.

"*37th day.* She says that when she swallows, her throat feels sore, and that it has been so for the last two days. On examination, the upper parts of the posterior palatine arches are whitish, while the surrounding mucous membrane is preternaturally red. There are on her right cheek two reddish brown patches, having a diffused and deep base; but with this exception, there is no eruption, nor does she complain of pains. The pudenda are less swelled. Her bowels seem, from her account, to be in an irritable state.—*Castor oil: quantum sufficit.*

"*39th day.* She complains much of weakness, and has nocturnal perspirations. She says, that since the operation of the oil her throat is better, and it does not appear so red. The other symptoms are as before.

41st day. She appears faintish and weak, and perspires much on the slightest exertion. Complains greatly of the soreness of the pudenda, yet they appear less swelled. The spots or patches in the perineum are more raised. The fissures at anus are deeper, and their edges overlap their surfaces, which are whitish. The white patches in her throat appear deeper, but are still flat.

"*44th day.* The sense of weakness, and the disposition to perspire, continue. Has occasionally a pain in her head, to which she has not been subject. The skin surrounding the anus, though fissured, is not fungous. Bowels confined. Other symptoms as before.

"*46th day.* Complains of heats or flushings. She does not perspire so much. The patch on the left labium no longer presents, at its circumference, an ulcerated groove. It is filled up. Other symptoms as before.

"*48th day.* She considers herself better, and says the perspirations have ceased. Her throat appears less white. All the patches seem smaller and drier, and on the whole improved. She spontaneously remarks that the skin of her face has become rough.

"*51st day.* Her general health seems improved. She says she is stronger, and has better spirits. The fissures at the anus seem to be filling up; and the rugæ which separate them are acquiring the appearance of excrescences. The other symptoms as before.

"*55th day.* The diseased appearance in her throat is more marked. It is whiter, and the surrounding redness, which is deeper the nearer to the edge of the white surface, is increased in intensity. On one side, the diseased surface seems raised. She says she feels herself sorer 'behind;' and the surface round the anus appears more raised. All the small spots in the perineum, except one, are gone. This one is much elevated, flat on the top, and of the size of the end of a finger.

"*58th day.* The patches on the pudenda have become more white or parboiled looking, and on the surface of the one on the left labium, a number of pulpy-looking whitish spots, like flattened pustules or vesicles have formed. She complains more than she did of the region of the anus. Other symptoms not worse.

"*60th day.* She complains very much of soreness of the anus, particularly at night. The skin surrounding this part is still more raised; and, on accurately examining it, the raised portions seem to be the tumid skin which separates the ulcerated fissures. In many parts these fissures form the skin into islands, giving an appearance analogous to that formerly produced by the ulcerated groove which surrounded the patch on the left labium; the other symptoms as before. Omit, Acid et

Haucat. hydriod. potassæ misturam.

"62*nd day*. She considers herself much better since she commenced the last medicine. Her 'seat' is not nearly so sore, and she 'scarcely feels her throat.' There was, she says, a considerable discharge from the parts yesterday, but this has ceased. Her appetite is improved. Her bowels are confined. On examination the diseased patches on pudenda appear shrunk, and their whiteness decreased; but her throat is scarcely altered.

"65*th day*. She considers herself much better; says, 'I scarcely know myself I am so well,' yet her throat does not to me appear better. The diseased surface is fully as white as it was, but is more raised. The pudenda, &c. seem as they were.

"69*th day*. All her symptoms are much improved. The diseased patches on the pudenda are drier, and less white; and the fissures at the anus are filling up. The whiteness of her throat has nearly disappeared.

72*nd day*. To use her language, 'I am finely; a great deal better in every way: my health is almost as well as ever.' Her throat seems better; but there exists a small superficial ulceration on the inner surface of her lower lip, not before noted. She is at present labouring under the menstrual discharge; has taken four drachms of the hydriodate of potash since she commenced that medicine.

74*th day*. The state of the pudenda and anus is wonderfully improved. All the fissures in the latter situation have disappeared, and the elevated patches on both parts are greatly shrunk. There is scarcely any discharge, and the small spots about the perineum have become quite flat. The diseased surface of throat is still slightly white, and evidently raised.

"76*th day*. Her throat seems better, and the diseased patches on the pudenda, &c. &c., are still more shrunk. The one at the anterior angle of the vulva is on a level with the surrounding skin; she however says, that she feels the throat a little more sore, and attributes this to cold caught yesterday.

79*th day*. She complains still more of her throat. The whitish surface seems thicker, and its centre is slightly darker in colour than its circumference; yet the pudenda and anus are, she says, better, and they appear so. Her stomach and bowels are in a healthy state.

"81*st day*. She says her throat is better. The whiteness is less decided, and seems to be breaking up with red. The other symptoms as before.

"83*rd day*. She considers herself better. The centres of the diseased patches in her throat have become red, and their circumference remains white. The large patch on the left labium is depressed in its centre, and its border rounded. The raphe of the peroneum is tumid, but the parts are healed.

"86*th day*. The diseased patch at the right side of her throat is nearly of a uniformly red colour, while the middle and the circumference of that on the left are white, and these white parts are separated from each other by a red circle. The other symptoms as before.

"90*th day*. Both sides of her throat are nearly clear of whiteness. There is still, however, an areola surrounding the surfaces formerly white; and there is an appearance of an incipient fissure, or rhagade, at the anus. In other respects those parts are not altered. Her right eye is slightly inflamed."

This concludes the reports of the second period, or until the commencement of iritis. Let us now pause until I make a few

Remarks,

particularly on the affection of the mouth and throat, under which M. D. laboured. This affection well illustrated some of the characters of the exanthematic form of disease, when mild, and on a mucous surface. It was the palatine arches and lower lip which were affected, and these are its most common seats, although it may and does attack all parts covered by the buccal mucous membrane, as the hard and soft palate, the uvula and tonsils, the anterior and posterior palatine arches, the upper, and under, and lateral surfaces of the tongue, the point of this organ, the inner surfaces of the cheeks, the lips, and the angles of the mouth; or, all these may be affected at the same time, as in the case of ANDERSON, which this drawing represents. Here is a drawing of the case of the woman BRENNAN, in whom the affection was limited to the hard palate. This drawing represents the disease as it occurred in BYRNE, on the anterior palatine arches, and this, a case where the uvula, the soft and hard palate, and the surface of the tonsils, were all affected. Here are other drawings which respectively represent the disease confined to the inner surface of the cheeks, to the angles of the mouth, to the dorsum and surface, tip and sides, of the tongue. As all these cases are registered in the case-book, you may examine them at your leisure.

Judging from the state of voice which sometimes occurs in this form of disease, I presume that it may attack the larynx. I have seen some cases where the power of enunciation had been so nearly lost that the patient could not speak, except in the lowest whisper. The voice, on these occasions, resembles that which attends a cold. It is an extreme state of hoarseness. Such were its characters in the instance of a female lately seen by you. I do not remember to have observed any case in which there was pain in the larynx; and in this respect the state differs remarkably from that which

attends the deeper forms of laryngeal ulceration, whether pustular or not. You observed in the case of the female to which I have just alluded, the great influence which mercury possessed of restoring the voice. As soon as the gums were touched in the slightest degree, her voice was restored.

It is remarkable that the arches of the palate, and other parts of the buccal mucous surface, are far more frequently the seat of this disease than the tonsils, which are the more especial seat of the pustular or excavated form of sore throat. The surfaces of the tonsils are, however, occasionally affected; they are then sometimes much swelled, and, as it were, tuberculated. This state was observed in P. D. On other occasions their size seems scarcely altered. More frequently, however, they are a little tumid. You saw a case some time ago in which this form of disease existed in a trifling degree on the root of the anterior palatine arches, and in which the tonsils were peculiarly affected: they were enlarged, and their surface was sprinkled, as it were, with particles of white matter, which might be compared to particles of mortar or of curd. Here is a drawing of the appearances. The patient's name was Smith. You will find his case recorded in the case-book. There was also at one time a somewhat similar appearance of the tonsils of P. D.

The degree of sensibility of the surfaces affected with this form of disease is seldom great; it varies, however, according to circumstances. When it occurs on the point or root of the tongue, or on the isthmus of the fauces, the affected parts are often painful; the pain is, however, at all times more a soreness or a troublesome tenderness than positive pain.

The connection of this disease of the mucous surface with a condylomatous state of the pudenda is so common, that you seldom see the one without the other. You know how this is to be explained; in fact, as I have said in some of my early lectures, condylomata are produced by patches of the exanthematic eruption occurring on moist or opposed cutaneous surfaces; and this peculiar disease of the mucous membrane is owing to patches of the same form of eruption occurring on them. The general eruption is sometimes, as in the case before us, very trifling, and often fades away without being observed; but from a close examination of numerous cases, I have formed the opinion that it always occurs, although it may not be visible at the time we are consulted.

In short, the uniformity of character which the mild varieties, more particularly, of this disease, present, as well in their appearance as in their accompanying symptoms, is so remarkable, that I am compelled to wonder why it has not attracted more attention from authors, or obtained in their writings a full description.

It always commences by a white or yellowish pulpy surface, which may be compared to the appearance which granulations present when touched with the nitrate of silver; or, to a surface painted with cream or milk. This pulpy surface, which is surrounded by a diffuse areola, is generally on a level with the surrounding surface. Often it is a little higher, but sometimes a little lower; it is occasionally so much higher at the circumference than in the middle, that it seems to have a raised margin. This is often observed when the disease occurs at the angles of the mouth. Its outline is, for the most part, rounded; but it may be of different forms, owing, principally, to the situation in which it occurs, or to the mode of junction of one or more patches, originally distinct. Thus, it sometimes has a serpentine appearance; very often it is not of the same uniform colour; it may be red or reddish in its middle, and this red centre may be surrounded by a whitish colour, so arranged as to form a ring. You may also occasionally observe patches presenting an alternation of reddish and whitish rings, the one inside the other, like so many concentric circles. In the case of BRENNAN you have seen a red centre surrounded by a white ring, and this by a red ring, outside which last there was a circle of a white colour, and this surrounded by an areola. This patch, which was on the surface of the hard palate, is represented in this drawing. It also very often happens that the patches of this disease disappear, by becoming first red in their centres, so that their circumferences form white rings, and these rings then break up at a number of points, and subsequently disappear; at other times, the white ring dilates itself like what is vulgarly called a ringworm, the diseased surface apparently becoming well in the centre, while it spreads at the circumference. Not unfrequently these patches are traversed by one or more fissures. Sometimes they become unusually elevated, and then they present an appearance not unlike condylomata. It is such patches as occur on the surface of the tongue (its dorsum) and on the tonsils, that most frequently exhibit the condylomatous aspect. Patches of this form are also occasionally to be seen on the soft palate and palatine arches. On other occasions the patches present an opposite state; that is, they undergo a loss of substance, and form ulcers. These are, for the most part, very superficial and white, particularly at the circumference of their surface; they are surrounded by a more or less deeply-marked areola, and their whiteness of surface is sometimes broken up by small red granules, as this drawing, which was taken from the case of ANDERSON, illu-

trates. These bodies seem to be the mucous glands which resisted the ulcerative process more than the texture in which they are imbedded, and hence they project; they are most frequently to be seen on such ulcers as occur on the hard and soft palate.

Although, as I have said, these ulcers are, for the most part, very superficial, they occasionally become more deep. You may remember that P. D. lost a large portion of one of his tonsils. When this destructive character exists, it is most difficult to distinguish this form of disease from the pustular. Indeed I do not know of any mode of arriving at a correct conclusion upon this point without the assistance afforded by the history of the case, and by collateral symptoms. Thus, if the accompanying affection of the skin be condylomatous, or of the scaly kind, there can exist no doubt that the affection of the mucous surface is exanthematic.

The more superficial varieties of the exanthematic form of disease on the mucous surface can never be mistaken for the pustular forms; they may, however, be mistaken for an affection sometimes produced by the action of mercury, provided the diseased surface alone be considered. When, however, the mercurial affection to which I allude occurs, there exists, or there has lately existed, the ordinary symptoms of salivation, which leave no doubt of its nature. I may here remark, that the resemblance between the appearance of the mercurial and the exanthematic affection, as well as the little resemblance which exists between the latter and the excavated forms of venereal ulceration of the throat, has been most probably the cause why some persons have formed the erroneous opinion that the exanthematic form of disease was a consequence of mercurial action. This is, however, a great mistake. If there be any form of disease characteristic of the influence of the venereal poison, this form is characteristic. Need I observe, that in the case of M. D., and of many others which you have seen, it could not have been mercurial, for they had not previously used a particle of mercury. Again, there are few affections which yield with more certainty to mercury.

Independently of the mercurial ulceration of the mouth to which I have alluded, there are other affections of the buccal mucous membrane of a non-venereal nature, which might be mistaken for this exanthematic syphilitic ulceration. Of this kind are cancerous and scrophulous ulcerations, particularly of the tongue and lip, ulcerations of the gums or cheeks produced by the pressure of the teeth; and a peculiar form of ulceration of the interior of the cheeks and lips, which seems to be connected with a deranged state of the alimentary canal; and lastly, the state called psoriasis, or pityriasis of the mouth. Now, how are we, on these occasions, to avoid error? I reply, by attending closely to the history of the ulceration, and its accompanying symptoms, and by making yourselves perfectly acquainted with those phenomena which I have laid down as characteristic. If these be kept in view, you will never err; for although, on a superficial glance, the venereal may seem to resemble the other affections, whenever you institute an accurate comparison their difference will strike you with great force; therefore, to enlarge on this subject would only be to recapitulate what I have already said of the appearances of the venereal affection.

I have still another word to say. This form of disease seems to have been noticed by Mr. Hunter by the name of ulcerous excoriation; but,—in conformity to the principles of diagnosis laid down by him respecting the symptoms of syphilis, as it sometimes resisted the action of mercury, and as it did not always cause that loss of substance which he conceived to be an essential character of the true venereal ulcer,—he affirmed that it was not syphilitic. He was, however, as much mistaken upon this point as respecting the syphilitic affection of infants; indeed the disease of the mucous surface which we have been considering, being, as well as the venereal affection which occurs in infants, exanthematic, and a product of a modified poison, there existed the same reason for denying the venereal character of the one as of the other.

ON THE INCLINATION OF

VEGETABLES TO DIRECT THEMSELVES TOWARDS THE LIGHT,

AND ON THEIR

TENDENCY TO AVOID IT.

By M. Dutrochet, *Paris.*

The fact of the tendency of the stalks of vegetables to incline towards the light, is known by all the world: the fact of the tendency which they sometimes manifest to fly from the light has really not yet been scientifically considered; though its discovery, due to Mr. Knight, may be traced back to 1812. That observer had been conducted to this discovery by remarking the direction which the tendrils of climbing plants take. Those tendrils incline towards the solid bodies which are in their vicinity, as if they were attracted by them. Now, Mr. Knight has proved by experiments, that this phenomenon of special tendency, is due to the circumstance that those tendrils which avoid the light incline to the opaque bodies which are near them because it is on that side that the least light reaches them. My experiments upon the

germination of the seed of the misseltoe, published in 1824, furnished a new and completely demonstrative proof of the existence of the tendency of certain vegetable stalks to fly from the light. The little stalk of the seminal embryo of the misseltoe, the stalk which the rudimentary radicle terminates inferiorly, flies from the light; and mark why it directs itself towards the opaque bodies on which the seed is pasted.

A very celebrated botanist has explained the tendency of stalks to bend towards the light, by admitting, in the side of the stalk which is kept from the direct influence of the light, a greater elongation than in the side which is directly illuminated. This explanation is founded on the known fact, that the diminution of light favours the elongation of stalks (*etiolement*).* It appears, then, quite natural to admit, that the side of a stalk which is away from the light will be a little *etiolé*; and will assume, consequently, a greater elongation than that which will be assumed by the illuminated side of the stalk, the side which will be more promptly solidified. The result of this excess of elongation of the side which is situated away from the light, will be, that the entire stalk will be curved towards the light. Thus, according to this theory, it will be the side of the stalk that is opposite to the light, which will alone act in bending the stalk. This theory, as simple as it is ingenious, has obtained the assent of every one, and yet it cannot stand before an experiment which is perfectly simple.

I took a young stalk of lucerne, which was greatly bent towards the light, and I cleft it in two, so as to separate that one of its sides which was directed towards the light, or the illumined side, from the opposite side, which was directed away from the light, or the obscure side. At the moment of this division, the illumined side curved itself much more profoundly, and the obscure side became straight again. The latter was then curved, in spite of itself, towards the light,—the sole agent of the flexion of the stalk under these circumstances. Now, by the theory set forth above, the illumined side should be curved passively.

I proved, a long time since, that all the inflexions which the stalks of vegetables assume, depend on an inequality occurring in the tendencies to incurvation which exist in the concentric portions of those stalks. In the natural state, these tendencies to incurvation, concentrically opposed, counterpoise each other, so that the stalk of the vegetable preserves its upright condition; but if an external cause, acting specially on one side of the stalk of the vegetable, diminishes the force of incurvation on that side, the result will be that the opposite side, whose force of incurvation may not be varied, will become the stronger, and draw the antagonizing side, which is thus overpowered, in the direction of incurvation which is proper to it. From this principle flows the tendency of stalks to direct themselves towards the light, and their less common tendency to fly from it, as I proceed to show.

All climbing plants apply themselves against their supports, because they avoid the light which flows from the side opposite to that of the support; it is towards the latter that the stalks tend to flex themselves, as the following experiment proves:—I detached from the trunk of a tree the summit of a stalk of ivy, and I maintained it, removed from the tree, by the interposition of a little bit of wood. Six hours afterwards this ivy-stalk had flexed itself towards the tree, and re-applied its top to the latter. Thus, in place of bending itself towards the light, this climbing stalk had bent itself in the opposite direction. I cleft, longitudinally, in two, this young and yet herbaceous stalk of ivy, so as to separate its illumined side from its obscure side, which was applied on the trunk of the tree. The obscure side was curved more profoundly; the illumined side grew straight again, and tended slightly to curve itself in the opposite direction. Thus, the flexion of the stalk, considered in its entire, was effected by the obscure side alone; the illumined side was passive in this flexion. This is, as we plainly see, the inverse of that which takes place in stalks which flex themselves towards the light. In seeing stalks bend thus, some towards the light, and others in the opposite direction, one must conceive that those stalks whose flexion was inverse under the influence of the light, must possess, in certain points, an inverse structure. This, observation has also demonstrated; for in all stalks just shot forth, and still herbaceous, the bark is entirely composed of a cellular tissue, the cells of which present two arrangements of decrement. The external layer of this cellular tissue presents cells which decrease in size from within outwards; the interior layer of the same cellular tissue presents cells which decrease in size from without inwards. Thus it is in one of the median divisions of the thickness of the bark, that the larger cells are found; and I have observed, generally, in stalks which bend

* *Etiolement*; an alteration which occurs in plants; a disease which causes them to shoot forth long, slender, stalks, of a white colour, and terminated by puny leaves, ill formed, and of a pale green. Such are grasses which we often find under stones. The blanching of lettuce, endive, and celery, is nothing but an artificial *etiolement*, by which we give to those plants a softer taste. —*Laveaux's Dictionary*.—Ed. L.

towards the light, that it is the internal layer of this cortical cellular tissue which is the thicker, so that it is that layer which determines the general mode of incurvation which results when we detach a longitudinal slip, and plunge it into water. This slip, then curves itself inwards; its epidermis occupies the convexity of the curvature. This is the natural result of the turgescence, by endosmose, of the cells, decreasing in size from without inwards, which predominates in this bark.

I have observed an inverse mechanism in stalks which bend in a direction inverse to the afflux of light; in them it is the external layer of the cortical cellular tissue which is the thicker, and as, from the mode of decrement of its cells, from within outwards, it tends to curve itself outwards, it is that which determines the general mode of incurvation which affects a longitudinal slip of this bark when it is plunged into water. Its epidermis is then found situated on the concavity of the curvature.

It results from these observations, that in stalks which bend towards the light, the bark tends to curve itself inwards, and that in stalks which bend in a direction inverse to the afflux of light, the bark tends to curve itself outwards. This curvature is, in both cases, the effect of cellular turgescence. So long as the bark possesses, in its whole periphery, an equal force of incurvation, the stalk remains upright, since all the antagonizing forces of incurvation are balanced; but if there occur an enfeebling of this force of incurvation of the bark, on one side of the stalk, the latter is then bent by the action of incurvation of the bark of the opposite side, which has experienced no enfeebling.

Now, we know that light augments the transpiration of vegetables; it diminishes, consequently, the turgescence of those cells of the bark on which it falls; it occasions, then, by this very circumstance, the diminution in the force of incurvation of the bark. Now, if this latter tend to curve itself inwards, or towards the centre of the stalk, the force of incurvation being enfeebled by the light on the illumined side of the stalk, and the obscure side of the stalk having preserved all its force of incurvation, the equilibrium is broken. The central system, which always tends to bend outwards, no longer finding, on the illumined side of the stalk, opposition to its incurvation equal in degree to that which existed before, in consequence of the antagonizing influence of the bark, the central system acts more freely on that side, and bends the entire stalk towards the light. It is then aided by the bark of the opposite side,—the side whose central system is forcibly bent in the opposite direction to that of its natural tendency to incurvation. Thus this obscure side returns spontaneously to its natural incurvation, when it is separated from the illumined side, which, then, freed from its antagonist, curves itself more completely outwards.*

It is by an inverse mechanism that the stalks of climbing plants bend in the direction which is opposite to that of the afflux of light. In those stalks, the bark tends to curve itself outwards. Now, the light, enfeebling this tendency in the side on which it falls, the central system of that side,—the central system whose tendency to incurvation is equally outwards,—is deprived of an auxiliary. From this time the central system of the opposite side of the stalk, or of the obscure side,—the central system which has retained in the bark which covers it, an auxiliary whose force has not varied,—bends the entire stalk in the direction which is opposite to that of the afflux of light. The central system, and the cortical system of the illumined side of the stalk, are then forcibly curved in the direction which is opposite to their natural tendency to incurvation. In some instances, indeed, we see stalks of climbing plants direct themselves towards the light, though it is generally their nature to avoid it. So, for example, ivy, attached to a wall, applies a great number of its stalks upon that support, and projects others forwards; those latter as evidently direct themselves towards the light as those stalks which are applied on the wall, avoid it. The reason is this; the intense light, by augmenting vegetable respiration, strengthens the incurvation of the central fibrous tissue of the stalk, an incurvation which tends to operate outwards, and, consequently, towards the light, which

* In consequence of the disengagement of oxygen, which always proceeds more rapidly under the influence of light, the tendency of the fibrous tissue is to curve outwards, and most so on that side from which the light proceeds; but in the young stalks of which M. Dutrochet speaks, it exists in such small proportion that its influence may be fairly overlooked. The influence of the central cellular tissue, as the cells always diminish in size from within outwards, always tends to curve the plant outwards by endosmore. M. Dutrochet supports these theories by microscopic observation, and has mentioned many interesting facts respecting the missletoe, the vine, the weeping ash, the juniper communis, and explained the erect position of the flowers of the convolvuli purpureus and arvensis, when full blown, and their drooping condition before and after, by the greater extent thus afforded for transpiration, restoring the equilibrum between the opposite sides. The erect position of the convolvulus sepium he accounts for from the circumstance that its two large bracteæ afford means for similar transpiration.—Ed. L.

strengthens it. I have observed that the stalks of ivy, to avoid the light, require, in their vegetating extremity, a slight degree of *étiolement*, a state from which results the feebleness of vegetable respiration. From this influence of vegetable respiration on the inflexion of stalks under the influence of the light, it results that vegetable stems which are no longer green, and which, consequently, do not produce respiratory oxygen, neither tend to direct themselves towards the light nor to avoid it. Such are roots in general, so long as they remain white; but when, accidentally, they become green, they evince the tendency to direct themselves towards the light, or the tendency to avoid it, and that according to the structure of their bark, as I have explained respecting stalks.

According to this statement, every thing is purely *mechanical* in the inflexions which the stalks of vegetables assume under the influence of light; there is nothing "instinctive," as some, possibly, have supposed. I do not venture to decide affirmatively if it be the same with regard to the *oscillaires*,* in which the tendency towards the light is very manifest.

The oscillaires are certainly vegetables, for they disengage oxygen in the light, which is perhaps the most distinguishing character of vegetable nature; at least, in relation to green vegetables, and the oscillaires have this colour. Notwithstanding their *spontaneous* movements, then, the filaments of the oscillaires are not those of animals. Those filaments, however, transport themselves, spontaneously towards the light as animals would do. I have convinced myself of this fact by the following experiment; I put a small portion of the *oscillaira smaragdina* (Bory) in the bottom of a salver, filled with water, and I covered it with a small plate of lead, bent into an elliptic arch. The filaments of the oscillaire fled from beneath this little arch, which intercepted the light, and not one of them remained below it. All proceeded, by a spontaneous and independent movement, to place themselves outside of, and at a short distance from, the little arch of lead, and assembled themselves there, forming a green membrane on the bottom of the salver. But a short time was required for the production of this phenomenon, which, besides, only took place, when the temperature was + 15° *centesimaux*. M. Bory, de St. Vincent, informs me, that he has also observed the transport, towards the light, of the oscillaires, which he regards as beings that are intermediate between the animal and vegetable kingdoms.

* The oscillaires are a genus of Cryptogamous plants of the family of the *Conferveæ* which present simple, cylindrical jointed filaments, united at their base, and floating on water, or fixed on bodies which may be found therein; the species which belong to this genus have been confounded by botanists with the conferveæ and tremelles, but they differ from these in being always simple, and possessing an oscillatory movement, which appears to ally them to animals. 12 species.—Ed. L.

OSTEO SARCOMA OF THE FACE.

To the Editor of The Lancet.

Sir:—The following case of osteo sarcoma of the face may not be uninteresting to most of your numerous readers. I am, Sir, your obedient servant,

Jas. Geo. Davey, M.R.C.S., London.
3, Mile End Terrace, Portsmouth,
May 18th, 1837.

A child of the name of Davis, about nine years old, fell, whilst playing with other children, and received a slight bruise near to the external angle of the left eye. Little or no notice was taken of the accident, and, in a short time, the bruised part had apparently re-acquired its healthy condition.

After the lapse of nine or ten weeks there was observed a slight enlargement in the part which was previously affected by the injury, which gradually increased, involving all the surrounding structures. At the time when I first saw the case (at the latter end of March last), the whole left side of the face was occupied with a large, somewhat firm, and unyielding tumour, attended with considerable uneasiness, and, occasionally, acute pain; presenting an unequal surface, and an irregular outline, the effects, probably, of the different degrees of resistance offered in its progress by the several structures destined to be involved in the diseased mass. The disease was of rapid growth, and destroyed the life of the child within twelve months. Its death was especially accelerated by the frequent hæmorrhages which took place from the ciliary aperture. The eye, it should be understood, was forced much from its natural position, the bones of the orbit having become absorbed in the progress of the disease. The accompanying diagram represents the original very faithfully.

The autopsic examination, in which I was assisted by my friend Dr. Engledeu, disclosed an extent of disease which was hardly to be anticipated. The bones involved in the disease might be enumerated thus:—The superior maxillary bones, with the exception of the anterior alveolar processes, the palatine bone, the pteregoid process, and both alæ of the sphenoid bone; the lateral portion of its body, and that of the basilar process of the occipital bone, were seen in a state of necrosis. The malar

bone, the zygomatic process of the temporal bone, including the glenoid fossa, and some part of its squamous portion, the posterior and lateral part of the frontal bone, that part directly above the great alæ of the sphenoid bone.

The orbital process of the frontal bone was nearly all preserved.

The internal bony parietes of the orbit were removed, and the internal nares filled with the diseased mass; the bones naturally found in that situation were entirely destroyed. The tumour had, moreover, extended into the right antrum, which it entirely filled, and was already involving the osseous structure in its vicinity.

It seems probable that the disease had its origin in the pterego-maxillary fossa, from which situation it extended in every direction. Proceeding upwards, the floor of the middle fossa of the internal base of the skull, lodging the left middle lobe of the cerebrum, was removed, and the brain was interfered with, inasmuch as the tumour was lodged in the anterior and middle lobes of that organ. The child, for some months before its death, was hemiphlegic.

The tumour, when entirely removed, represented two large masses, the communicating medium being a size smaller than its extremities; the smaller extremity of the tumour, or that lying within the skull, being of the size of a large orange; it rested anteriorly on the orbital process of the frontal bone, being in close approximation with the anterior and internal table of the skull. The disease, when cut into, showed the usual characters of osteo sarcoma, and gave to the knife that peculiar crispy feel which is considered by Mr. Mayo as pathognomonic of its nature. Sir Astley Cooper's case, related in the "Surgical Essays,"* in which the eyes were pushed out of their sockets by two exostoses which grew from the antrum, and one of which destroyed the patient, by making its way to the brain, through the orbital process of the frontal bone, bears a close affinity to the one above detailed.

* Vide article "exostosis," Cooper's Dictionary.

FŒTAL RESPIRATION.

To the Editor of THE LANCET.

SIR:—In THE LANCET of the 20th instant, there is an interesting paper, by Mr. Hilles, of Westminster, "On the Mechanism of Respiration." With the views entertained by that gentleman with regard to this important phenomenon, I, for the most part, fully coincide; but not feeling quite satisfied with the explanation he has given of the *cause* of "Fœtal respiration," I should feel obliged by your allowing me to state, through the medium of your Journal, my objections to his theory.

At page 297, Mr. Hilles observes, "I have no doubt that respiration can, and frequently does, take place during this process; nay, that even the dead fœtus may be made to respire, if the simple inflation of the lungs can be called respiration. I have clearly shown that the lungs are obedient to the parietes of the thorax, following carefully their different states of contraction and expansion. Now, if any force, no matter what, should compress the thorax during parturition, and that force be suddenly removed, the thorax will expand by the resistancy* of its parietes, and thus the air will enter the lungs as a necessary consequence; and particularly so if the compressing force should be now applied on the abdomen, so as to restrain the abdominal viscera from ascending, and filling the vacuum that is formed in the thoracic cavity.

"To elucidate this subject, let us suppose that, during a difficult labour, the thorax of the fœtus is forcibly compressed as it escapes from the os uteri, it makes its way into the vagina, being now freed from pressure, the resistancy of the thoracic parietes restores the parts to their original condition; the thorax expands; the abdomen being now, in its turn, compressed, the lungs are dilated, and the air rushes in to fill the vacuum that should otherwise be formed."

That respiration does sometimes take place during parturition, is fully established, and that even a dead fœtus may receive a small portion of air into its lungs is not improbable; in fact, if the explanation of fœtal respiration, as given by Mr. Hilles, be correct, it can be so only where the fœtus is still-born. Mr. Hilles has evidently confounded the state of the thorax and its con-

* Query, elasticity.

tents *previous* to, with their condition *after*, respiration has taken place. He appears to have forgotten that the lungs in the fœtus are in a *highly condensed state*, that the thoracic parietes are closely contracted upon them, and could, therefore, admit of *but very little, if any, further compression*. The lungs being of a nature to admit some change of form, would yield slightly to the pressure of the thoracic parietes, and would, at the same time, become elongated; and on the pressure being removed, both lungs and thorax would resume the state natural to fœtal life.

It has been already observed, that if Mr. Hilles's theory be ever applicable, it must be in the case of a putrid or still-born fœtus; *e. g.*:—Suppose a fœtus to have been dead some time, and putrefaction to be so far advanced as to occasion the development of those gases which are generated during that process; the lungs are, in this state, considerably distended, and the air-tubes filled with gas: if the thorax, under these circumstances, were subjected to pressure, it would yield readily, to a considerable extent, and a portion of the gas contained in the air-cells would be expelled. On the removal of the pressure, the chest would again expand, and a small quantity of atmospheric air might enter the lungs; the lungs having thus been once inflated, would readily admit a repetition of the process. It may be asked, Why, if the expansion of the thorax of a dead child be attended with a slight inspiration, does not the thorax of a living child assume its natural dimensions after having been subjected to similar pressure? The answer is, that the difference in the condition of the lungs and thorax of a living and a putrid fœtus, is quite sufficient to account for the difference in the effect produced; the lungs in a living fœtus being, as has been before remarked, in a highly condensed state, undergo merely a change of figure and position, from pressure, with very little, if any, alteration in volume, and regain their form and situation on the removal of the pressure.

With regard to the effect of compression on the abdomen of the child by the contraction of the os uteri, it must, in every case, tend to prevent the expansion of the thorax: pressure applied above or around the margin of the false ribs would, in a measure, prevent their elevation, and, consequently, directly oppose the expansion of the thorax in a lateral direction; and any pressure below the margin of the ribs would press the liver, stomach, &c., upwards, upon the diaphragm, and thus lessen the cavity of the thorax.

It is of the first importance, in a medico-legal point of view, that we should arrive at correct conclusions on this subject; trusting, therefore, that Mr. Hilles will consider that these remarks upon a portion of his valuable paper have originated in a sincere desire to ascertain and elicit the truth, and not in a spirit of captious criticism, I remain, Sir, your very obedient servant,

JAS. BEDINGFIELD BRYAN, M.D. M.R.C.S.E., &c.

Medical School, Stowmarket,
May 31, 1837.

DR. COLLIER ON THE NEW PHARMACOPŒIA.

To the Editor of THE LANCET.

SIR:—I believe you will agree with me that a Pharmacopœia is a national document, and that it tends to elevate or degrade the character of a nation, according as it is well or badly executed. On the score of practical errors committed by the College of Physicians, I have already commented pretty freely in my own edition of the English Pharmacopœia, but as one of their anonymous scribblers has attacked the credit of my performance, not by pointing out a single practical error, but by accusing me of the enormous crime of spelling Magendie's name with a *j* instead of a *g*, and leaving out the letter *h* in the word aphthæ, I now ask you to do myself and the College a favour by allowing me the opportunity of teaching them a little grammar for their next edition, and when they shall have read my corrections, let them thank their anonymous friend for this additional good office on my part, with which they would never have been favoured had it not been for the ill-judged zeal of their juvenile Scaliger.

Page 67, smaller edition, l. 5, for "mixto" read *mixtis*. If the president and censors advert to a certain rule, they will find that adjectives, &c., agree with their substantives in number, &c., &c.; and further, common sense will tell them that *one* thing cannot be mixed.

Page 92, "ficorum concisorum" should be *concisarum*, as the same rule will shew them, for example, "ficûs pinguissimæ uncias tres," quoth Celsus, and most other worthies.

Page 66, "Aconiti Radicis exsiccati et contusi," should be *exsiccatæ et contusæ*, any where and every where except in Pall-Mall-East.

Page 157, "Cautè destillet oleum," is not sense, unless oil has a soul, and possesses reason.

Page 158, "Zingiberis contritæ," should be *contriti*, and so also in their columns. "Zingiber officinalis" should be *officinale*. Pliny makes it feminine, but Pliny's nominative is "Zingiberis."

Page 51, "Quinæ disulphas (crystalli). In aquâ, præsertim acido mixtâ, tota liquatur." How any substance can be more

than entirely dissolved, remains for the College, or their juvenile Scaliger, to explain. The black girl who said that "Miss Laura and Miss Sophy were equally pretty, 'specially Miss Sophy," might perhaps explain it.

Page 37, "Hic liquor, &c. multâ aquâ diluto," should have been *dilutus*. Still sinning against the second concordance.

Page 81, and elsewhere, "singularum" should be *singulorum*, for the sense is "of each thing or article," and this concordance does not come within the rule of the masculine being more worthy, &c.; or if they retreat, and say that it does, then they have made fifty mistakes instead of two or three.

"These may be considered as things too puerile to deserve the notice of a practical physician; but for one who has no longer the fear of the birch before his eyes, it would have been better to leave them altogether to schoolboys, than to commit so many little errors, of any kind, in a work which ought to be a standard of precision."

I need not tell them whence I derive this quotation, nor what practical use was made of it in 1816. Why do they provoke me? Shall I give the history of their Court of Examiners from 1820 to the present period?—*Haud ictus sapio*. Do they think that, after working for them one half of my life, I will tamely submit to be bullied the other half?

Your Journal is too valuable to admit of my saying more on the subject of their blunders, but if you or the College require it, I will go on every week for a month or two. "Fas est ab hoste doceri." I will example them for scholarship, and if they have the honesty to refer to page 65, of my Pharmacopœia, they will see that I have written Magendie's name with a *g*, which I hope will satisfy them.

Your humble servant,
G. F. Collier, M. D.

32, Spring Gardens,
June 13, 1837.

P.S. The College hireling likewise says, that I have left out an *a* in guaiacum:—I plead guilty; but if he refer to page 259, he may refresh his soul with a sight of the *a*.

THE MINERAL ACIDS.

To the Editor of The Lancet.

Sir:—One or two circumstances respecting poisoning with the mineral acids may be mentioned in addition to those stated in the admirable lecture of Dr. Thomson, published in last week's Lancet, viz., in cases of poisoning by the *concentrated* mineral acids, the medical attendant should *dilute* largely, to prevent their corrosive effects. Dr. T. cannot be among those few who do not recommend dilution in cases of poisoning by sulphuric acid, because of *heat* by this means being generated! A recommendation of an opposite kind, is with regard to oxalic acid. Pupils should be cautioned against the use of diluents in poisoning by that substance, because of its promoting absorption. In distinguishing oxalic acid from Epsom salts, that most easy and simple test, *heat*, should be mentioned, the oxalic acid being perfectly volatile, the sulphate of magnesia, not so, as may be easily proved in a silver spoon.

I am, Sir, your obedient servant,

J. H.

City, June 13, 1837.

MARYLEBONE INFIRMARY.

To the Editor of The Lancet.

Sir:—A vacancy having lately occurred in Marylebone Infirmary, for House Surgeon, several candidates presented themselves on the day of nomination before the committee of the board of guardians, furnished with their respective testimonials, when the gentleman who was possessed of the highest qualifications, and whose testimonials would at once place him at the head of the profession as a fellow of the College of Physicians if he wished it, was not admitted even as a candidate, the preference being given to the lowest qualification of the profession, agreeably with the terms of the advertisement, which required all candidates to possess a certificate from the Apothecaries Company. I am the more surprised at this decision of the committee, from knowing that two or three of them are medical gentlemen, but, in justice to one of them, I must observe, that he advocated the cause of professional science, by endeavouring to overcome the absurdity of strictly attending to the words of an advertisement; by this decision not only was the highest qualified person prevented from offering himself for the situation (but, strange to say,) no medical officer of any of the hospital establishments in London would have been found qualified. What strange inconsistency, after increasing the salary fifty pounds per annum a few days before, from an alleged desire to induce some of the highest qualified gentlemen to offer for the situation! In the event of the vacancy again occurring, it is fair to presume that, acting on the *retrograde* system, he whose name is best known to the public by being plastered in large white characters on the walls around London, will be judged best qualified for the situation of House Surgeon of the Marylebone Infirmary.

I may be permitted to observe, that the committee manifested good taste in paying little regard to the certificates of private surgeons and physicians, that sort of testi-

monial being now tolerably well exploded. I have the honour to be, Sir, with great respect,

AN OBSERVER.

*** In requesting the publication of this letter, the writer should have announced in it the name of "the highest qualified person," in order that the profession, to whom an appeal is intended to be made, might have had the opportunity of deciding for themselves whether the gentleman in question possesses any claim to that title. Indeed, at present, the letter itself being anonymous, how can the public know that the "highest qualified person" is not here passing judgment on himself?—ED. L.

MEETING IN DUBLIN.

IRISH MEDICAL CHARITIES BILL.

To the Editor of THE LANCET.

SIR:—In THE LANCET of Saturday, the 4th instant, you recommended the profession, generally, to hold public meetings, to petition against some of the provisions of the Irish Medical Charities Bill, which will not only insult and injure the profession in Ireland, but will, unquestionably, shortly react to the detriment of medical men in England and Scotland. That No. of THE LANCET was received in Dublin on Monday, and it would appear that but little time was lost in putting your advice into operation.

Messrs. Jacob and Harrison, the two individuals who are chiefly interested in the monopoly of the Irish College of Surgeons, thinking that, in consequence of the advice in THE LANCET, which was certain to sway all the liberal members of the profession, they could, by a little dexterity and address, make the co-operation of that party available to their own ends, and thus give an air of *unanimity* to their selfish proceedings, Messrs. J. and H. were the first to move in the business: so, having, according to custom, put the College of Surgeons, and the whole profession of surgery, into their breeches pocket, they forthwith walked over to Dr. Croker, the President of the College of Physicians, who having summoned to his aid some two or three of the DONS among secret conclave, agreed upon a string of resolutions, which they imagined, from the peculiar circumstances of the case, they might venture to submit to the otherwise dangerous experiment of a meeting of the two colleges (physicians and surgeons) publicly convened.

The conducting of these proceedings occupied Monday, Tuesday, and Wednesday; in the afternoon of which last mentioned day, the members and licentiates of both colleges received by the twopenny post, from their repective presidents (Jacob and Croker) the following notice:—

"There will be a general meeting of the fellows, members, and licentiates of the Colleges of Physicians and Surgeons at Morrison's, on Thursday the 8th instant, at 4 o'clock, to consider the provisions of a bill, now in progress through parliament, for the better regulation of hospitals, dispensaries, and other medical charities in Ireland."

There was no public advertisement to convene the meeting, save in one morning tory paper, and that only appeared on the morning of the meeting, and no reporters were admitted.

The meeting assembled at 4 o'clock. Upwards of one hundred medical men were present; very few, however, took any part in the proceedings. It was at first intended to put Dr. Jacob in the chair, who thought, doubtless, that he might go over to London to join the surgical deputation, with tenfold effect, if he could proceed there as chairman of that meeting, with the "unanimous" resolutions in his hand. So strong a prejudice, however, was found to exist against that learned jobber, that even he thought it better policy, in order to carry his own objects, to yield to public feeling on the occasion. Accordingly Dr. Marsh was voted into the chair, and Dr. Apjohn appointed, according to previous arrangement, secretary of the meeting. The chair was taken at nearly half past 4 o'clock.

The hoped for, and ardently desired, unanimity was, however, soon interrupted by Dr. Collins, ex-master of the Lying-in Hospital, and Dr. Lendrick, professor of the theory and practice of medicine in the School of Physic in Ireland, who, as mover and seconder of a resolution to adjourn for a few days, and in the mean time print the resolutions for the consideration of the meeting, protested strongly against the injustice and absurdity of calling upon so large an assembly, at such an important crisis, and upon such vital topics, to pronounce *impromptu* judgments upon resolutions which were submitted to them, now for the first time, and which judgments they were to record as their deliberate convictions, and thus be irretrievably bound, hand and foot.

This salutary and reasonable proposition, though coming from such a respectable quarter, and though supported by every thing in the room that deserved the name of argument, did not chime in with the cut-and-dried arrangements of the concocters of the whole proceedings. After a good deal of discussion, upon putting the question, it was declared by the chair that the noes had the majority, whereupon very many gentlemen left the room, and the resolutions

were then proceeded with, with comparatively little animadversion or discussion.

How could any body of medical gentlemen so forfeit their spirit, become so blind to their own interests and those of the medical profession, as to tamely follow in the wake of any small number of individuals, especially where that petty number included the greatest jobbers in the profession. Instead of seizing so valuable an opportunity of investigating the whole of so important a question, and to vindicate, in the strongest manner, their own honour, and their privileges.

The resolutions have not been published, but they will doubtless see the light in some shape or other, though from the hole and corner manner in which they were concocted,—from the numerous difficulties which were thrown in the way of free discussion,—from the terror of publication, so feelingly evinced on the occasion,—from the character of the prime movers, who are deeply interested in the corruptions which disgrace our medical institutions,—all these tend to create suspicion. In the mean time numerous individuals have declared that those resolutions are not the deliberate and unanimous opinion, even of the alumini of the two Royal Colleges in Dublin, who, after all, constitute but a small portion of the Irish medical public. In fact, they cannot in justice be viewed as anything but the opinions of the movers and seconders only of the resolutions, for from no others did they obtain deliberate attention. I am, Sir, your obedient servant,

O'Brien.

Dublin, June 10, 1837.

THE EVIDENCE

RELATING TO THE

MEDICAL RELIEF OF THE SICK POOR IN THE PAROCHIAL UNIONS,

GIVEN BEFORE THE

SELECT COMMITTEE OF THE HOUSE OF COMMONS, IN 1837.

Thirteenth day.—Friday, April 2nd.

Mr. Fazakerley in the Chair.

The Rev. William Brock examined.

6177. Mr. Walter.] Are you the rector of Bishop's Waltham?—Yes.

6178. How long have you resided in that parish as rector?—Between three and four years.

6264. Are there any instances of hardship in point of medical relief in the Droxford Union, in your recollection?—I have known several. There is one case which I have down here, affecting the relieving officer; the relieving officer could not attend to his duties as he ought, and, therefore, the surgeon, in a great measure, supplies his place, which is not right, because the surgeon might not know whether relief ought to be administered.

6266. Is the medical officer in your district (Mr. Lovekin) a young man?—Yes.

6269. Are you in favour of the system of taking medical officers by tender?—I think it very injurious to the poor.

6270. Does it afford a sufficient security against inexperienced practitioners?—I should say not, because young persons might oftentimes obtain the situation in preference to persons who are practising in the neighbourhood, much to the disadvantage of the profession and the discomfort of the poor.

6271. Do you know why the services of Mr. Smith, your parish surgeon before the union, were discontinued?—No, I do not.

6273. Had he been long practising in the neighbourhood?—Yes, and the poor are much attached to him; I think it is hard that the poor should be exposed to be visited by strangers, which the system of tendering occasions.

6275. Without meaning to reflect on Mr. Lovekin, tell us whether you think the sick poor receive prompt medical attendance under the existing system?—I know several instances in which it has not been rendered; it is not the fault of the practitioner, but of the system. Eliza Sandall, a widow and a cripple, 82 years of age, made repeated and ineffectual applications to the medical officer for medical aid during dangerous illness. She had an order, I believe, from the relieving officer, in the first instance, to Mr. Lovekin, during the influenza, of which she was so dangerously ill that her friends did not expect her to recover: she got unexpectedly better, and was not visited till then, which was two or three weeks after she first applied. This case was represented to the guardians, and they attempted to disprove it by what is termed evidence.

6284. Mr. Wakley.] How far did she reside from the practitioner?—A mile and a half.

6285. Mr. Hodges.] In what way did she apply?—Her daughter went four times to him to procure his attendance, and got medicine, but he did not come.

6289. He sent medicine?—Yes; which is very dangerous, I think, without seeing the patient. Widow Woodman, also, applied twice for medical attendance, and she was never visited at all. She is a poor woman, living by herself.

6294. Mr. Wakley.] When did this occur?—At the time of the influenza.

6295. Before the last contract was made

with the medical practitioner?—Yes; that was made last March.

6296. Sir OSWALD MOSLEY.] Was there complaint made to the board of non-attendance of the medical man?—There was; I made the complaint myself. Thomas Toogood, also, an able-bodied man, applied three times for medical aid during sickness without success. He attempted to return to his work before he received medical advice, and in consequence he was laid up again for a month. The wife of Thomas Baker applied twice for assistance in severe illness; medicine was sent, but no attendance was given, and in consequence another medical man was called in, who, when he first saw her, did not expect her to recover. These cases I might easily multiply. I have good reason to believe, that at the time most of the cases occurred the medical man was unwearied in his exertions; but there should have been a greater number engaged in visiting and relieving the poor, and much of their misery would have been alleviated.

Complaint of these and other cases having been made to the Board of Guardians by the witness, the Board professed to examine into them, and the Chairman returned the following answer to Mr. Brock on the 27th of March, 1837:—"Sir, Enclosed you have the evidence taken by the guardians of this union relative to the several cases mentioned as cases of neglect. The guardians regret that you should have brought charges against them without first informing yourself whether they were founded in truth. You must have been imposed upon by the parties in question, &c. &c.

"ROBERT H. STARES, Chairman."

The evidence alluded to contained the subjoined statements (abridged):—"The relieving officer states, that Mrs. Toogood applied to him on the Wednesday in the week after her husband was taken ill (3rd February); he then gave her an order for the medical officer to attend her husband, who, on the following Saturday week, visited him. Toogood was ill about a month, and received during that time £1 17s. 5½d. from the guardians. Mr. John Pearman states, that Toogood went to work again after he had been ill about a week, for one day; at night he was taken ill again. Pearman then called upon Mr. Lovekin, who went directly with him to see Toogood. Mr. Lovekin came to see him and attended him every day during his illness, and he was perfectly satisfied with his treatment. Respecting Widow Woodman, the relieving officer states, that no application was made to him on her behalf, and, therefore, he could not know her wants, and Mr. L. J. Lovelin states, that he knew nothing about her; if she had sent twice he must have seen her, from the nature of his arrangements. Of Eliza Sandall, Mr. L. J. Lovekin states, that when he called to inquire about her case, her daughter informed him that she had been bed-ridden these three years, and had herself previously said that no doctor could do her any good. He sent medicines and did not go. Respecting the wife of Thomas Baker, Mr. L. J. Lovekin states, that he knew Thomas Baker was not entitled to parochial medical aid."

6312. How was this evidence obtained?—By one of the guardians going round to the parties mentioned.

6313. Have you since inquired into the truth of the cases?—I have. I received the evidence only one day before the board ceased, and another election took place; therefore, I had only a few hours to reply to it. I said respecting Toogood's case that the evidence only proved what I complained of, namely, that he was not properly and punctually attended. By their own showing he was not visited by the medical officer for *ten* days after the application was made. As to Widow Woodman, I confidently repeat my former statement. If Mr. Lovekin knew nothing about her, how came he to send her medicine?—Respecting Eliza Sandall, it was two or three weeks after the application was made in her behalf, that Mr. Lovekin called; of course he could not know anything about her till then; this evidence, therefore, refutes itself. As to the wife of Baker, if Mr. Lovekin knew that this family was not entitled to parochial relief, why did he send her medicine, and lead her to expect his attendance, and how came he to cease to see her after all? I added, "I have yet to learn how I have been imposed upon by the parties in question. I have rather to thank you for the confirmation which it gives to the truth of my statements. However, I cannot expect to convert you, and you certainly will never persuade me to give up the plain common sense view of the question, that one relieving officer for this union is insufficient." There are two documents, one from a clergyman, and the other a declaration on the part of Mrs. Sandall to the truth of her having applied four times of her own accord. And the clergyman (the Rev. Mr. Trench) says, "The four applications were all equally in vain, though twice her daughter, Mrs. Hammond, saw Mr. Lovekin, and each time he promised to be at her house before her own return; and I perfectly remember that the poor woman recounted to me, with considerable indignation, how all her applications to him had been unsuccessful. The guardians of the Droxford union, in their letter to you, have assumed a very triumphant tone to hide a very weak case. Pray do not go back from this case of Mrs. Sandall; it is worth further investigation; and I will pledge myself that it will bear it."

THE LANCET.

London, Saturday, June 17, 1837.

Often do we hear that the present Ministers are sustained in their places by the strength of the Irish Reform party in Parliament. "Were it not," it is constantly said, in the Conservative, the Radical, and other journals, "for the presence of the "great number of Reformers who have "been sent into the House of Commons by "the people of Ireland, the Melbourne "Administration could not last during a "single week." Far be it from us to withhold commendation from the powerful party thus referred to, for the course which it has pursued in Parliament; nor are we disposed to dispute its strength, to question its numbers, or to detract from its influence and authority. If, however, only a moiety of what has been said of its force be true, that party could easily annihilate the 47th section of the Irish Poor Law Bill, which proposes to place all the hospitals, infirmaries, asylums, dispensaries, and medical charities of Ireland, under the merciful and considerate government of the Poor Law Commissioners of England. In this odious provision, the distinguishing principle of the Irish Medical Charities Bill was adopted—we will not say fraudulently—but by anticipation; and when it was moved that the vile clause containing this foul emanation from Somerset House, should be postponed until the Medical Charities Bill could be brought under discussion, only 13 Irish Members voted in favour of that proposition; but it is worthy of remark, that Sir Robert Ferguson, member for Derry, was the *only* gentleman who left the *Tory* side of the House, and joined the Reformers on that occasion! Look to it, ye physicians and surgeons, ye medical officers of the hospitals, the infirmaries, and all the other medical charities of Ireland! Look to it! Ye are about to be delivered over to the authority of three Commissioners, whose conduct has raised the ire and indignation of the whole body of medical practitioners in England.

In the last Lancet we published the names of 15 Members who voted at least for the *postponement* of the proposition,—*all* that could be mustered even for *delaying* the perpetration of this iniquity. We reinsert the list in this place, which, it will be seen, contains the names of 13 Members sitting for places in Ireland, and those of 2 sitting for places in England. Mr. Warburton, notwithstanding that his predilections are all in favour of the general principles of the new Poor Law Amendment Act, is still, consistently and manfully, contending for the independence of the medical officers of the Irish institutions, by preserving them from the tyrannical grasp of the Poor Law Commissioners:—

Bridgeman, H.	O'Connell, M. J.
Crawford, H. S.	O'Connell, Morgan.
Ferguson, Sir R.	Ruthven, E.
Fitzsimon C.	Vigors, N. A.
Musgrave, Sir R.	Wakley, T.
O'Brien, W. S.	Warburton, H.
O'Connell, D.	Wyse T.
O'Connell, J.	

On Thursday se'nnight a public meeting of members of the Irish College of Physicians and Surgeons, was held on this subject in Dublin The speeches were, many of them, energetic, and several of the speakers exhibited correct views of the objects which it is the duty of the profession to attain at this important crisis. Sufficient stress, however, was not laid on the influence which it has all along been said that the Irish party in the House of Commons can exercise over the decisions of the Executive Government. If the 47th section of the Irish Poor Law Bill be allowed to remain in that measure, we hesitate not to declare, broadly and distinctly, that the cause of its remaining there will be found in the conduct of the Irish party in Parliament. Of this fact there cannot be a doubt. Were the Irish Members to combine, and make an united effort to throw out that clause on the bringing up of the Report,

Ministers would, undoubtedly, yield to the wishes of the Irish Members, so generally and emphatically expressed, and at once strike out the obnoxious section. It ought to be recollected that when the Irish Poor Law Bill was introduced into the House of Commons, not a line of the Medical Charities Bill had been framed, and, in fact, it was only until some weeks *after* the Poor Relief Bill had been read a first time, that the Secretary for Ireland, in consequence of applications which he had received from the sister country, announced that it was the intention of the Ministers to place the medical charities of Ireland under the provisions of a distinct and separate Statute.

Taken as a whole, these proceedings have been exceedingly unjust towards the profession,—unjust, injurious, and insulting. If the *Medical Inspectors* are to be placed under the control of the *Poor Law Commissioners*,—or if, rather, the hospitals and all the other medical charities of Ireland are to be governed in conformity with rules and regulations which are to be issued by the Commissioners then the main duties of the Inspectors will be comprised in seeing that the regulations framed by the Commissioners are obeyed by the medical and all the other officers of those charities. The Inspectors will act as the puppets, the tools, or the spies, of the *Poor Law Commissioners*. We object not, of course, to the institution of a correct and honourable system of supervision, in any one, or in the whole, of our public medical or other establishments; but when it is proposed to place the Medical Inspectors under the control of lay Commissioners, we dissent at once from the proposition, because it is unsound in principle, and must operate injuriously and oppressively in practice. Fearing that our brethren of the profession in Ireland may not keep steadily in view the objectionable sections of the two Bills which are now before Parliament, relating to the enactment of Poor Laws, and the new regulations for the government of medical charities, we shall here re-insert them. By the 47th section of the Poor Relief Bill, it is provided that the Poor Law Commissioners may "from time "to time, as they may see fit, make and is- "sue all such orders as they shall think "proper * * * * for the GOVERN- "MENT of every such hospital, asylum, "infirmary, dispensary, mendicity, and "other charitable institutions, and the OF- "FICERS thereof, as the Commissioners "may deem necessary for the prevention of "any CONFLICT between the OBJECTS "and PURPOSES of any institution and "the OBJECTS and PURPOSES of THIS "ACT."

Then the 8th section of the Medical Charities Bill is framed as follows:—

"8. And be it enacted, that the POOR LAW COMMISSIONERS for the time being, acting IN THE EXECUTION of an Act of the present session of Parliament, intituled, 'An Act for the more effectual relief of the poor in Ireland,' shall hereafter exercise a GENERAL SUPERINTENDENCE over all infirmaries, hospitals, dispensaries, asylums, and other medical charities throughout Ireland, and OVER THE SAID MEDICAL INSPECTORS appointed under the provisions of this Act."

If these provisions become law, can a doubt exist in the mind of any sane person, that the government of all the charitable medical institutions in Ireland which are not *wholly* supported by voluntary contributions—an exception allowed in the Poor Relief Bill,—will be placed entirely under the merciless and indiscriminating lay-government of the petty despots of Somerset House?

But *why* is this proposition made? *Why* are the Poor Law Commissioners to execute these despotic functions? *Why* are the *medical* charities of Ireland to be subjected to the discipline of these Commissioners?

WHY? Mark the plain answer. We quote the words from the section just inserted. It is "to PREVENT any CON- "FLICT between the OBJECTS and PURPOSES "of ANY institution, and the OBJECTS and "purposes OF THIS ACT." In other words, a system of UNIFORMITY is to be established

in all the medical institutions of Ireland, wherein *medical* officers exercise the functions and duties of their profession. Thus, as the medical officers of the new gaols which are about to be established in the Unionsare to be placed under the iron-fisted control of the Poor Law Commissioners, so, also, are the medical offices of the great hospitals, infirmaries, and asylums of Ireland, to be subjected to the same mild and generous authority. As *one* set of officers may be dismissed at pleasure, *so may be the other*. As *one* set may be made to work without remuneration, *so may the other*. As *one* set may be insulted with impunity, *so may the other*,—ALL being prostrated, ALL having their necks, under the feet of the mighty, but, nevertheless, hateful Commissioners. Are the medical practitioners of Ireland prepared to submit to this outrage and insult without remonstrance,—without calling upon their representatives, on the departure of every post, to resist the foul and scandalous scheme to the last extremity? Are they prepared to see the medical offices of the New Unions, as well as of the endowed and all the other medical charities in Ireland, let BY TENDER, to the LOWEST BIDDER? And are they aware that the system of *tender* is in full operation under the rules and regulations of the Commissioners in the Poor Law Unions of England?

What would have been said if it had been proposed in any measure, *apart from the introduction of a poor law into Ireland*, that all the medical charities of that country should be *rendered subject to the control of the Poor Law Commissioners of England?* The disgraceful project would have been indignantly denounced, not only by the medical profession of Ireland, but by the whole of the intelligent community. For our own parts, we cannot discover that the proposal is in the slightest degree less inconsistent with the maintenance of the independence of the profession, because it happens to be *mixed up with another law*, which is to provide a certain amount of gruel, potatoes, and confinement, for the destitute, but, as yet, unincarcerated poor. The *object*, however, of the proposers of the scheme is before us in an undisguised shape. It is to prevent a "*conflict*" between the objects and practices of two sets of institutions which are appropriated to the use of the poor. It is to render the antiphlogistic diet,—so necessary for the hot-blood of the Irish people in the whole of those institutions,—*uniform*. It is to open *all* the medical offices to *tender*. It is to make *all* medical officers hold their situations at the pleasure of the Commissioners, and it is to subject *all* medical officers to *dismissal*, whenever, by asserting their independence, they incur the *displeasure* of their hard-hearted and tyrannical lay rulers.

There is yet time to expel from the two Bills which we have noticed, the odious dross which they contain; and if the Irish members be faithful and energetic in the discharge of their duty, the purification will be accomplished without delay or difficulty. The interests, the honour, the independence of the medical practitioners of Ireland, are at this moment *held in trust by the Irish party in Parliament*. If our brethren of the sister country be sacrificed, we are resolved that no share of the iniquity shall belong to ourselves.

SOUTHERN BRANCH OF THE PROVINCIAL MEDICAL AND SURGICAL ASSOCIATION.

ON Thursday, June 8, the members of this Society held their first anniversary meeting at St. John's House, Winchester; Dr. CRAWFORD in the Chair. There were upwards of forty members present, among whom were Drs. Forbes and M'Carrigher, of Chichester; Drs. Fowler and Grove, and Mr. Winzan, of Salisbury; Drs. Oke, Henner, and Wheeler, of Southampton; Messrs. Lyford, Wickham, Mayo, Sampson, Bloxam, Day, Pursell, Warry, &c. &c. &c. The business of the day commenced by an introductory address from the President, which was ordered to be printed. Resolutions were then proposed and carried: among others the following was moved, viz., "That it is advisable to award a prize every two years to members, for the best essay on any

appointed subject." The subject for the prize in 1839 is, "On the efficacy of the new medicines introduced by the College of Physicians into the Pharmacopœia of 1837." The next anniversary meeting will be held at Salisbury; Dr. Fowler in the Chair.

After the meeting, nearly forty members dined together at the *White Hart*. On the removal of the cloth (the usual loyal toasts having been drunk), the College in Pall-mall, the College of Surgeons, and the Rhubarb Hall Company, were severally lauded to the skies, as were also the Pures of the *Winchester Hospital*, and those of the adjacent towns: AFTER which came "The general practioners," the *lower* grade of the profession! Some of these eyed the gracious Chairman and the surrounding Pures, with perfect adoration. Others, feeling less reverence for the "men in high places," when the Colleges of Physicians and Surgeons were toasted, drank "Reformation, or speedy abolition to them." General practitioners of the *rural* districts, *you* also were deemed worthy of notice—*you* of the *lowest* grade.

The President's address, so far as it went, deserved the applause which it received; but, strange to say (and, be it remembered, Dr. Crawford is a Liberal in politics), no mention was made in it of medical reform, which ought to be one of the grand objects of the Association. Dr. Crawford (if *any* excuse can be made for the omission) knew that the introduction of a proposition for the removal of abuses which exist in the profession, and especially in the medical charities and corporate bodies, would have roused the hostility of the corruptionists present; for staring him in the face were Messrs. Lyford, Wickham, C. Mayo (cousin of Mr. Herbert M.), Dr. Harris, "late of *St. Bartholomew's*," and others, equally notorious for their horror of equal rights and privileges. This latter gentleman, a fellow of the College in Pall-mall East, in rising to thank the company for "doing honour to his associates," said, that the College was anxious to promote the interests of the profession at large, and that they had condescended to admit into their body men of talent, without regard to the place of their education. The poverty of the exchequer which induced this excessive liberality, was forgotten to be mentioned.

THE SICK POOR.

SUGGESTIONS BY DR. TWEEDALE, LYNN.

(Communicated by H. W. Ramsey, Esq., Chesham.)

My chief objections to the present plan, as adopted by the Poor Law Commissioners, are, the degrading character of the system of tender; the insufficiency of remuneration; the employment of too few practitioners; and the division of unions into districts, by which the surgeons and their patients are frequently removed to a great distance from each other, thereby increasing the trouble to both parties, as well as preventing that prompt attention to all cases of sickness so necessary to their successful treatment.

The plan which appears to me best calculated to meet the various difficulties of the case (particularly in rural districts) is as follows:—

That three competent, impartial persons (two to be of the medical profession), who shall neither be biased by the rate-payers nor the surgeons, should be appointed in each county of England and Wales, to fix the amount which they may consider sufficient for the payment of medical attendance upon the poor in each Union.

The amount being fixed, all surgeons, legally qualified, and of good character, who may have been resident in or near the Union during the last year, should be made acquainted therewith, and invited to attend the paupers, upon the following conditions, *viz.* of each surgeon receiving, at the end of every quarter, his proportion of the sum fixed upon for the payment of medical relief for the paupers of the whole Union, according to the number of certificates held by him at the termination of such quarter.

The relieving officer (or overseer, in cases of necessity, or where the relieving officer lives at a distance), should give to any pauper who may be taken ill, a certificate "that he is a pauper, and resides in the Union," with directions to take it to the Union surgeon living nearest to his residence, taking care not to give more than one certificate for the same illness.

The workhouse to be attended in quarterly rotation, by such surgeons as may reside at a convenient distance; and in cases of sickness in the workhouse, the master of the house should sign the certificates, and send them to the surgeon for the quarter.

The surgeons should enter into an engagement to attend all paupers who may present the necessary certificates, and in other respects to comply with the orders of the Board, for keeping the necessary books, &c. &c.

By this simple plan the odious system of tender will be avoided,—the sick will have prompt attendance,—every respectable, duly qualified surgeon, will have the option of attending the poor or not,—and the members of the profession will be satisfied that they have been fairly remunerated for their skill and labour. Some paupers may probably apply for very trifling ailments, but this will not increase the expense to the

Union, and as all the surgeons will have their share of trifling and severe cases to attend, it will make no difference to them in the amount of money to be received at the end of the quarter: whether many or few certificates have been issued, each surgeon's proportion of the sum total fixed upon will remain the same, although each certificate may bear less value.

(Signed) JOHN TWEEDALE, M.D.

Lynn, Norfolk,
March 12th, 1837.

MR. STAFFORD'S LANCETTED STILETTE

To the Editor of THE LANCET.

SIR:—Having read in THE LANCET for June 3, a letter from Mr. Pope, wherein he makes some erroneous statements relative to an instrument of my invention, called "the single-bladed lancetted stilette," I hope you will do me the favour to allow me to correct them.

Mr. Pope says, "Mr. S.'s instrument does not possess any handle. The spring of Mr. S.'s instrument is also exposed, which gives it a more complicated appearance than mine; and there is a danger of its being caught by the coat-sleeve, by which the stilette might be pressed out of its cavity, thereby giving rise to a probability of injury to the urethral passage," &c. He also infers that there is no regulating screw to my instrument.

Having, at the request of Mr. Samuel Cooper, shown Mr. P. this instrument, as well as others, I feel surprised that he should so soon have forgotten its structure. It possesses a handle, there being two rings, one for the finger and the other for the thumb, attached to the instrument underneath, and by which the operator is enabled to steady it, and gradually thrust out the lancet at the point. The spring of my instrument is internal, and concealed, like his own, and the lancet is immediately drawn back into its sheath by it, and there is also a regulating screw, to determine the distance to which it shall incise the stricture. The only difference between Mr. P.'s instrument and my own, is, that the handle is not quite the same, and there is a stopcock, in neither of which do I see, having operated with my own more than a hundred times, without the slightest injury to the urethra, any particular advantage. I have the honour to be, Sir, your obedient servant,

R. A. STAFFORD.

28, Old Burlington-street,
June 10, 1837.

EDINBURGH INFIRMARY.

ANEURYSM OF THE SUBCLAVIAN ARTERY, TREATED BY LIGATURE OF THE ARTERIA INNOMINATA.

ALEXANDER DUNCAN, aged 30, a carter, admitted 28th May, 1837, states, that fifteen months ago he fell from his cart, and pitched on his right elbow, causing, for some days afterwards, numbness of the ring and little fingers. Four months ago (eleven months from his first fall), he met with a similar accident, by which his left clavicle was fractured, but united without any unusual consequences occurring. Five or six weeks ago his attention was particularly drawn towards his right arm and forearm, by occasional pains, resembling cramps, with tingling sensations in the wrist and elbow-joints, which he ascribed to rheumatism, for which he rubbed his arm with camphorated oil and turpentine. He never observed any pulsating tumour until it was pointed out to him by a surgeon. He has always enjoyed robust health. Is of a fair complexion.

On examination, a pulsating tumour, of the size of a small egg, was found, situated above, and to the internal margin of, the clavicle, inclining, if anything, towards the sternal half of the same bone, the pulsations in which can very nearly be stopped, and the tumour much lessened in size. The pulsation in the radial and ulnar arteries is indistinct and fluttering. Since his admission he has complained of want of sensation, and of a disagreeable feeling of tingling in his fingers. On examining the chest with the stethoscope, its contents were pronounced to be healthy, and no abnormal bruit was heard, excepting over the tumour, where the bruit de souffle was very distinct.

On the 31st of May the operation for the ligature of the arteria innominata was performed. The patient being placed on a table, with his shoulders raised, and his right arm held by his side, an incision was made, beginning at about one inch over the sternum, and extending four inches along the inner margin of the sterno cleido mastoid muscle. In making this incision a small artery was divided, but it did not require a ligature. The anterior external jugular vein was here exposed, and held aside by an aneurysm needle. The sterno hyoid muscle was then pinched up with a pair of forceps, and carefully divided; bringing into view the sterno thyroid muscle, which was cut across in a similar manner. The carotid artery, at its junction with the subclavian, was then seen pulsating, and also the innominata; the latter was then cleaned, and an aneurysm needle carried carefully round it, from the right side, upwards, towards the trachea. The vessel was now compressed upon the needle, and all pulsa-

tion in the tumour and in the subclavian and carotid arteries immediately ceased. The ligature was then seized, and the artery tied, when the patient exclaimed, "Oh! my heart!" The skin was now brought together by means of four sutures. When cleaning the innominata, an artery (the thyroidea ima) was divided, and required a ligature. The hæmorrhage during the operation hardly amounted to two ounces.

Half-past two, P.M. (two hours after the operation.) No pulsation in the tumour, in the radial, or temporal arteries; right side of face of a shriveled appearance, and very cold; little difference in the temperature of the two arms; complains of pain in the course of the carotid and brachial arteries; has pain in the posterior part of his arm, particularly round the elbow-joint; has numbness and tingling sensation in his fingers; feet rather cold; pulse at the left wrist 74, and full; has perspired freely since the operation; left carotid artery beats with great violence.

Four, P.M. Complains of pain in the right side of chest on taking a deep inspiration; pulse 88, very full; some flatulence. ℞ *Aq. menthæ pip.* ℥i; *Sp. æther. sulphur.* ℥ss. M. q. pr. s.

Six, P.M. Has slight uneasiness across stomach; perspiration ceased; pulse 78, full.

Eight, P.M. More pain in right side of chest, accompanied by headach; passed a quantity of urine with great relief; feet warm; or no pulsation in the tumour, temporal or radial arteries of right side; pulse 78; skin cool and moist. *Habt. haust. anod.*

Ten, P.M. Headach rather worse; has taken his anodyne draught.

Eleven, P.M. Complains much of a sense of suffocation.

June 1. Two, A.M. Uneasy feeling gone off; headach much relieved; pulse 110, full.

Eight, A.M. Fell asleep at five, A.M., and slept until seven, A.M.; much easier; pulse 100, soft and full; skin cool and moist; has smoked a pipe, and "thinks it has relieved him much;" tongue loaded.

Noon. No difference in the temperature of the two sides; headach much better; pulse 100; bowels slightly moved.

Eight, P.M. Pulse 80, soft; tongue natural; no pulsation in tumour, or brachial or radial arteries; very slight pulsation in temporal artery; no headach; no pain in chest; wound looking well. *Repet. haust. anod.*

June 2. Eight, A.M. Slept from eleven last night until seven this morning; no pain; pulse 96; bowels slow; skin cool and moist. *Habt. haust. cathart.*

Noon. Slight nausea; bowels not opened yet; pulse 96; tongue foul. *Inject. cnæma purgans statim.*

Eight, P.M. Three copious evacuations from enema; pulse 96; urine drawn off with a catheter, and with great relief; pulsation of radial artery faint, in the temporal artery distinct; wound looking well, two-thirds of it united by the first intention.

June 3. Noon. Pulsation returned in the tumour; not so distinct in the radial; slept well; had another enema, and had his urine drawn off; no numbness in his hand, since the pulse at the wrist returned; pulse 100; tongue still furred; skin cool; some sanguineous discharge from the wound.

Eight, P.M. Face a little flushed; complains of heat of weather. *Haust. cathart. q. pr. s.*

June 4. Noon. Pulsation felt in temporal and radial arteries, but not in the tumour, which to-day feels quite hard; still some bloody discharge from the wound. The two middle stitches were removed from the wound. Had three copious evacuations; passes his urine naturally; feels quite easy; a poultice to be applied to the wound.

Eight, P.M. Has slept frequently during the day; pulse 110, soft. *Haust. anodyn.*

June 5. Noon. Has passed a good night, and feels refreshed; a little erythema round the centre of the wound; pulse 112, soft; bowels slow; pulsation in temporal, brachial, and radial arteries very distinct.

June 6. Since the last report this patient has continued to progress favourably. We shall conclude the report of the case on another occasion. We may here remark, that the operation was performed with much dexterity,—the patient was not fifteen minutes upon the table altogether.

LONDON MEDICAL SOCIETY.

Monday, May 22, 1837. Mr. Bryant, President.

EPILEPSY. NOSOLOGICAL ARRANGEMENTS.

The discussion on Dr. Uwins' paper was resumed.

Mr. Procter thought the most important point to decide was, the state of the brain coeval with, or connected with, epilepsy; this being the question out of which Dr. Uwin's paper rose. It had been considered by some of the members that the brain in this affection was in a state of plethora. He (Mr. P.) was inclined to think, on the contrary, that its condition was one of inanition; that there was a deficiency, rather than an increase, in the power of the circulation.

Dr. Shearman inquired whether Mr. Procter alluded to the constant state of the brain in persons affected with epileptic attacks, or whether only to the state of the brain during the paroxysm of the disease?

Mr. Procter considered the brain in epi-

lepsy to be only secondarily affected. Other symptoms were present besides those which were referable to the state of the brain. There was generally spasm of the rectus abdominis; and the stomach was distended with gas, the escape of which afforded the patient much relief. The times at which epileptic attacks came on, was against the opinion that the brain was in a plethoric state; we saw them chiefly when the circulation was less vigorous than usual, as after fatigue: they came on too, frequently in patients when rising from the recumbent position.

Dr. J. Johnson said, he believed we were quite ignorant of the state of the brain connected with epilepsy. We only know that the patient was insensible,—did not evince impressions, or voluntary motion. Epilepsy came on in all states of the system; in states of plethora as well as in those of inanition. Mr. Procter thought the affection generally sympathetic; he (Dr. J.) considered the cause was in the brain itself. The "premonitory symptoms" were not present in the majority of cases. As far as his experience and reading went, epilepsy, in a great majority of instances, occurred when the patients were in bed, and often even during sleep. He had no doubt, however, that attacks did come on from the sympathy of the brain with distant parts, as disorder of the stomach, &c. But then there must be a particular state of the brain previously existing, or such sympathies would invariably produce epileptic attacks; but what that state was we knew not.

Dr. Whiting agreed with Dr. Johnson, that sometimes epilepsy came on without any obvious exciting cause; proving that there is a condition of brain producing these attacks, without any evident cause. Were we not to call this state epilepsy; or were we to follow the advice given by Dr. Uwins, when we wished to speak of the disease and enumerate all the symptoms? Nosology, as at present constituted, was undoubtedly deficient in many points; but we were not to discard it entirely.

Mr. Headland considered that one of the most common causes of epilepsy was mental disturbance, independent of any physical condition; and he related two cases in point. One was that of a gentleman who fell down at the altar in a state of epilepsy, to which he had never before been subject; but the attacks continued afterwards for some years. Another instance was that of a father, who lost two children at once. On being informed of the death of the second, he immediately became the subject of an epileptic attack. Nosology was valuable as a means of instruction; but, from the fact of diseases constantly changing their characters from the operation of a variety of circumstances, it constantly required additions and alterations. For instance, what was there in Cullen's description of "peripneumonia notha," which applied to the symptoms of the late influenza; or where should we find a description of the malignant cholera in that author's nosology?

Dr. Bennett considered nosology useful to the student and the teacher; but that it was to be discarded in practice. To form an accurate diagnosis, we must examine the symptoms of which the patient was the "object," and deduce from them the abnormal condition of the organs which gave rise to these symptoms.

Mr. Dendy considered nosology, as at present taught, to be productive of harm. The student, on being informed that a certain train of symptoms was to be called epilepsy, when he found these present investigated no farther, and did not inquire into the condition of the system, or whether the brain was in a state of plethora or not. He (Mr. D.) thought we should discard names altogether, and examine accurately into the train of symptoms presented to us in each individual case. In speaking of epilepsy, he had been surprised that none of the previous speakers had gone below the brain in their inquiries. Why was not the state of the spinal chord to be taken into consideration? He believed we knew nothing about the exact state which produced epilepsy; but why not reason from analogy? Look at the effect of a wound of the spinal chord, causing the receiver of it to jump much higher than he could on ordinary occasions. So, under an attack of epilepsy, the delicate girl became affected with the most violent spasm, and required several persons to hold her. The presence of the brain was not necessary to produce inordinate muscular motions. Acephalous infants had convulsions. He had examined a great number of cases of epilepsy, in which he found the sheath of the upper part of the spinal column thickened, and containing a small quantity of milky effusion.

Mr. Kingdon agreed with Dr. Bennett, that nosology might be useful as a means of teaching, but that it was to be discarded in practice.

After a short discussion between Dr. Whiting and Mr. Kingdon, the debate was adjourned.

Geology.—At the meeting of the *Royal Institution*, on the 12th of May, Dr. Mantell delivered a very interesting lecture on the geology of the country lying between London and Brighton, and also on the tertiary strata of Tilwick Forest; with some particulars respecting the fossil remains of the iguanodon, discovered by the lecturer in the Wealden. The lecturer first stated the evidence on which geology rests, and its importance as a science: he then proceeded, in a familiar way, to describe the geological character of the country above mentioned.

He had stated, on a former occasion, in speaking of the tertiary strata of the Weald-den, that there was evidence that the world, at some distant period, had been chiefly inhabited by reptiles. This opinion was attacked by Dr. Kirby in his "Bridgewater Treatise," as an unphilosophical and unscriptural doctrine. "As if," said the lecturer, "there was any detraction from the benevolence of the Deity in conferring happiness on any class of individuals." We were too apt to consider the happiness of the human race alone as a matter of importance, remembering that other portions of the creation might also be designed to enjoy happiness. The Doctor concluded a very eloquent discourse by repeating the peroration printed at page 446 of the last volume of THE LANCET.

MEDICO-BOTANICAL SOCIETY, May 24th.—The anniversary meeting was held this evening at the *Royal Institution*, when Lord STANHOPE delivered his annual address. It embraced an elaborate analysis of the chief papers which had been read before the society during the session, accounts of which have already appeared in THE LANCET.

LONDON MEDICAL SOCIETY, May 29th.—The society held its last meeting for the session on the 27th ult., and was occupied almost entirely with explanations respecting the discussion at the previous meeting. A child, sixteen months of age, a patient of Mr. DENDY, was exhibited, for the purpose of ascertaining the opinions of members respecting a remarkable tumour, situated at the lower part of the spinal column. The tumour was of an irregular shape, puckered on the surface, and about the size of a penny loaf. In consequence of the lateness of the hour, the relation of the case was postponed until the next session. On retiring, the President made some observations on the influence of medical societies in raising the character of the profession. After returning thanks to the members, he left the chair, amid applause.

CORRESPONDENTS.

Mr. F. G. Johnston. We do not "know" any person of the name mentioned. If he be what he is described, he is out of the pale of the profession.

Mr. LYON requested us last week, and has again requested us this week to say, "That the separate reports of eight cases treated by Dr. Turnbull, at the *Westminster Ophthalmic Hospital*, containing, also, the conclusions of the cases, signed by Mr. Dasent; and the other three reports, with the conclusions, signed by Mr. Baillie, are deposited with Mr. Churchill, publisher, Prince's-street, Soho, who will show them to any one who may desire to see them."

Corporal Ward.—Were it a necessary consequence of the inversion of images on the retina, that the *mind* should perceive them to be upside down, then it might be correct to speculate on the cause of their being recognised in an upright state. But the upside-down result has not yet been proved to be inevitable. Every theorist, however, appears to have forgotten this. Be the image pictured in whatever position it may on the retina, the mind clearly recognises the lower end to be the lowest, and the upper to be the highest, but *why* it does so, it as unnecessary to debate as the question, how the mind comes to be sensible that the representation of an object exists on the retina at all. The opinion that the "change of flanks is effected by the decussation of the optic nerves," is not new, but has often before been hazarded. Experiments and not conjectures are needed in physiology.

(*From Mr. T. Smith, Mildenhall.*)—The competition for Dr. ASHWELL'S MIDWIFERY PRIZES, took place at *Guy's Hospital*, on Monday, Tuesday, and Wednesday, the 1st., 2nd, and 3rd of May. The candidates for the Senior Prize, were Mr. C. Taylor, Mr. Boville, and Mr. E. Knowles; for the Junior Prize, Mr. Skinner, and Mr. Bedford.—They were required to write an essay on all the hæmorrhages which occur between the 6th months and the expulsion of the Fœtus, at the full period of utero gestation, and underwent, besides, an hour and a half of oral examination, principally upon Physiology, connected with the subject, practical points in difficult labours, and diseases peculiar to women; Mr. Boville, and Mr. Knowles, were considered to be equal in merit, and, in order to decide the award of the certificate of honour, they were, directly after the *rica race* examination, required to write an extemporaneous essay on the Anatomical Structure, Progress, and Termination of Hard Tumour of the Uterus. They were engaged during several hours upon the subject, and at the conclusion the following gentlemen were decided to be the successful candidates;—Senior Prize, Mr. C. Taylor; Certificate of Honour, Mr. Knowles; Junior Prize, Mr. Skinner; Certificate of Honour, Mr. Bedford.

ERRATUM.—In our account of the Epidemic, page 415, col. 2, lines 42, 43, *for*. "was observed at this stage in one case. The tremour involved the tongue," *read*, "was observed at this stage. In one case the tumour involved the tongue," &c.

The letter of *An Original Unionist* is hardly adapted for publication in our columns. If the questions were reduced to a few lines, we could find room for them. The subject is at present confused by a superfluity of observations.